

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 4

IN THE MATTER OF:

Chemtronics, Inc.
Swannanoa, Buncombe County,
North Carolina

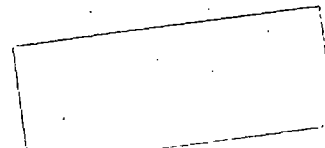
Chemtronics, Inc.
Northrop Grumman Systems Corporation
CNA Holdings, Inc.

Respondents

SETTLEMENT AGREEMENT AND
ORDER ON CONSENT FOR REMEDIAL
INVESTIGATION/FEASIBILITY STUDY

U.S. EPA Region 4
CERCLA Docket No.
CERCLA-042009-3752

Proceeding Under Sections 104, 107 and
122 of the Comprehensive Environmental
Response, Compensation, and Liability Act,
as amended, 42 U.S.C. §§ 9604, 9607 and
9622.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR
REMEDIAL INVESTIGATION / FEASIBILITY STUDY**

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ADMINISTRATIVE ORDER ON CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and Chemtronics, Inc., Northrop Grumman Systems Corporation, and CNA Holdings, Inc., ("Respondents"). The Settlement Agreement concerns the preparation and performance of a Site-wide remedial investigation and feasibility study ("RI/FS") with respect to contamination affecting soil, sediment, groundwater and surface water at the Chemtronics Superfund Site located in Buncombe County, North Carolina near the town of Swannanoa ("Site") and the reimbursement for Future Response Costs incurred by EPA in connection with the RI/FS as well as Past Response Costs. The boundaries of the Site are specified in the legal description included in Appendix A to this Settlement Agreement and incorporated herein by reference.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9607 and 9622 ("CERCLA"). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Settlement Agreement 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14-14-C and 14-14-D. This authority was further redelegated by the Regional Administrator of EPA, Region 4 to the Chief, North Superfund Remedial and Waste Program Branch, now known as Chief, Superfund Remedial and Site Evaluation Branch by Delegation Nos. 14-14-C and 14-14-D.

3. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), EPA notified the Federal and State natural resource trustees on September 5, 2007, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal and/or State trusteeship.

4. EPA and Respondents recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondents in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondents do not admit, and retain the right to controvert in any subsequent proceedings, other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of fact, conclusions of law and determinations in Sections V and VI of this Settlement Agreement. Respondents agree to comply with and be bound by the terms of this Settlement Agreement and further agree that they will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA and upon Respondents and their successors and assigns. Any change in ownership or corporate status of a

Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent's responsibilities under this Settlement Agreement.

6. Respondents are jointly and severally liable for carrying out all activities required by this Settlement Agreement. In the event of the insolvency or other failure of any one or more Respondents to implement the requirements of this Settlement Agreement, the remaining Respondents shall complete all such requirements.

7. Respondents shall ensure that their contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondents shall be responsible for any noncompliance with this Settlement Agreement resulting from the actions or omissions of their contractors, subcontractors, or representatives.

8. Each undersigned representative of Respondents certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind Respondents to this Settlement Agreement.

III. STATEMENT OF PURPOSE

9. In entering into this Settlement Agreement, the objectives of EPA and Respondents are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants or contaminants at or from the Site, by conducting a Remedial Investigation as more specifically set forth in the Statement of Work ("SOW") attached as Appendix B to this Settlement Agreement; (b) to identify and evaluate remedial alternatives to prevent, mitigate or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site, by conducting a Feasibility Study as more specifically set forth in the SOW in Appendix B to this Settlement Agreement; and (c) to recover response and oversight costs incurred by EPA with respect to this Settlement Agreement, as well as Past Response Costs.

10. The Work conducted under this Settlement Agreement is subject to approval by EPA and shall provide all appropriate and necessary information to assess Site conditions and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 ("NCP"). Respondents shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable EPA guidance documents, policies, and procedures.

IV. DEFINITIONS

11. Unless otherwise expressly provided herein, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 *et seq.*

b. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

c. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXX.

d. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

e. "DENR" shall mean the North Carolina Department of Environment and Natural Resources and any successor departments or agencies of the State.

f. "Engineering Controls" shall mean constructed containment barriers or systems that control one or more of the following: downward migration, infiltration or seepage of surface runoff or rain; or natural leaching migration of contaminants through the subsurface over time. Examples include caps, engineered bottom barriers, immobilization processes, and vertical barriers.

g. "Future Response Costs" shall mean all Response Costs that the United States incurs on or after June 1, 2007. Future Response Costs shall also include all Interim Response Costs, and all Interest on Past Response Costs accruing from June 1, 2007.

h. "HSMP" shall mean the 2003 Holistic Site Management Plan prepared by Respondents and submitted to EPA and DENR.

i. "Institutional controls" shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well drilling prohibitions.

j. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

k. "Interim Response Costs" shall mean all Response Costs incurred by the United States on or before May 31, 2007, but paid after June 1, 2007.

l. "NCAOC" shall mean the Administrative Order on Consent dated August 28, 1997 (Docket No. 97-SF-206) between the State of North Carolina Department of Environment, Health, and Natural Resources and Chemtronics, Inc.

m. "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

n. "Settlement Agreement" shall mean this Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (listed in Section XXVII) and all documents incorporated by reference into this document including without limitation EPA-approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by EPA. In the event of conflict between this Settlement Agreement and any appendix or other incorporated documents, this Settlement Agreement shall control.

o. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral. References to paragraphs in the SOW will be so identified (for example, "SOW paragraph 15").

p. "Parties" shall mean EPA and Respondents.

q. "Past Response Costs" shall mean all Response Costs incurred and paid by the United States from December 1, 1999 through May 31, 2007, plus Interest on all such costs which has accrued pursuant to 42 U.S.C. § 9607(a) through May 31, 2007, but does not include Interim Response Costs.

r. "Response Costs" shall mean all costs, including but not be limited to, direct and indirect costs, incurred by the United States in connection with the Site pursuant to either the UAO or this Settlement Agreement for reviewing or developing plans, reports or other items, verifying the Work performed by Respondents, or otherwise implementing, overseeing, or enforcing the UAO or this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, Agency for Toxic Substances and Disease Registry ("ATSDR") costs, and costs incurred pursuant to Paragraph 68 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 54 (emergency response), and Paragraph 100 (work takeover).

s. "RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, *et seq.*

t. "Respondents" shall mean Chemtronics, Inc. ("Chemtronics"), CNA Holdings, Inc. ("CNA"), and Northrop Grumman Systems Corporation ("NGC").

u. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral. References to sections in the SOW will be so identified; for example as "SOW Section V."

v. "Site" shall mean the Chemtronics Superfund Site, encompassing approximately 1,027 acres, located at 180 Old Bee Tree Road, in a rural area of the township in Swannanoa, Buncombe County, North Carolina, and depicted generally on the map attached as Appendix C.

w. "Site-wide" shall mean the entire Site including but not limited to areas which are the subject of the 1985 Administrative Order on Consent, Docket No. 86-03-C, the 1988 Record of Decision (ROD), the 1989 amendment to the ROD, the UAO, the prior NCAOC, and the areas where the Work is to be performed pursuant to this Settlement Agreement.

x. "State" shall mean the State of North Carolina.

y. "Scope of Work" or "SOW" shall mean the Scope of Work for development of a Site-wide RI/FS to address the contamination affecting soil, sediment, groundwater, surface water, SWMUs, and the adversely impacted areas around the SWMUs and the Areas of Concern ("ACs") as set forth in Appendix B to this Settlement Agreement. The Scope of Work is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement as are any modifications made thereto in accordance with this Settlement Agreement.

z. "Solid Waste Management Units" or "SWMUs" shall mean the units defined by RCRA, or under North Carolina law, N.C.G.S. §130A-290. The SWMUs and ACs to be considered for investigation pursuant to the SOW (Task 1- Scoping) include, but are not limited to, the following:

<u>SWMU No.</u>	<u>SWMU Name</u>
7	Building 153 Hazardous Waste Accumulation Area
19	Building 153 and Parking Area
22	Building 104 Washwater Sump
24	Building 104A Neutralized Washwater Basins
28	Building 146 Washdown Water Sump
34	Building 147 Complex Solvent Recovery Unit
35	Building 147 Complex Bay A
36	Building 147 Complex Bay B
46	Building 115 Washwater Sump and Ditch
54	Building 113 Primary Washwater Sump
55	Building 113 Secondary Washwater Sump
57	Location of the Building 113 Former Spent Solvent Staging Area
73	Building 149 Washwater Sump and Associated Ditch
81	Building 124 Waste Oil Accumulation Area

<u>AC No.</u>	<u>AC Name</u>
F	Fenced Process Equipment Storage Area (aka - Bear Pit)

Figures 3 and 4 of the Phase II Site Investigation Report for the Site (dated May 31, 2002) provide information on the locations of these buildings.

aa. "UAO" shall mean the Unilateral Administrative Order dated March 22, 1989 (Docket No. 89-21-C) issued by EPA to Chemtronics, Northrop Corporation, and Hoechst-Celanese.

bb. "Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any "hazardous material" under applicable State regulations.

cc. "Work" shall mean all activities Respondents are required to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

V. FINDINGS OF FACT

12. The Chemtronics Site is approximately 1,027 acres and is located at 180 Old Bee Tree Road in a rural area of the township in Swannanoa, Buncombe County, North Carolina. From the 1950's through the 1980's waste disposal via burning, evaporation, neutralization, and landfilling reportedly occurred over only a small portion of the Site.

13. The PRPs disposed of a variety of hazardous substances at the Chemtronics Site. The Chemtronics Site is an inactive manufacturing facility, presently owned and operated by Chemtronics, and previously owned and operated by Oerlikon Tool and Arms Corporation (1952-1959), Celanese Corporation (1959-1965) and Northrop Carolina, Inc. (1965-1971). From 1971 to 1978, the Site was owned by Northrop Carolina, Inc. and operated by Airtronics, Inc. Located within the Site's boundaries are 23 disposal areas grouped into six discrete areas, encompassing approximately 10 acres, which were addressed in the 1989 amendment to the ROD. Between 2004 and 2006, all structures not associated with the ongoing CERCLA related action were demolished with the resulting debris disposed off-site.

14. The disposal areas received waste products and by-products associated with the manufacturing of explosives, flares, military incapacitating agents, and various chemical intermediaries. The primary waste streams included chlorinated and non-chlorinated solvents and acidic solutions. The disposal areas contain drummed material associated with the production of incapacitating agents. One of the disposal areas includes numerous disposal pits/trenches. Another disposal area contains a leach field, neutralization basin and a biolagoon.

15. Disposal practices prior to 1971 are not well defined. From 1952 to 1971, solid waste materials and possibly solvents were incinerated in pits dug in the burning ground. This area is now known as the Acid Pit Area. Chemical wastes were disposed of in trenches beside this burning ground. Waste materials generated in the production of incapacitating, surety agents, 3-quinuclidinyl benzilate ("BZ") and the tear gas agent, o-chlorobenzylidene malononitrile ("CS"), were placed in 55 gallon, rim-lid drums, reportedly covered with a decontaminating "kill"

solution and then buried on-site in trench-type landfills. These drums were disposed of in several disposal areas at the Site which are now known as DA 6, DA 7/8, DA 9, and DA 10/11.

16. From 1971-1975, following some form of neutralization and equalization, most of the liquid wastes generated on-site went to the Buncombe County Sewer System. Small volumes were disposed of in on-site pits/trenches. Solid wastes, rocket motors, explosive wastes, and other materials, were all burned in the burning ground. From 1975 to 1979, Chemtronics constructed pits/trenches, as needed, for the disposal of spent acid and various organic wastes. These pits and trenches are encompassed within the Acid Pit Area.

17. In 1979, Chemtronics installed a 500,000 gallon lined lagoon for biotreatment of wastewaters on top of an abandoned leach field for the main production/processing building. After the lagoon was filled it lost its content due to the incompatibility of the liner with the brominated waste introduced into the lagoon. Reconstruction of the biolagoon, with a different liner, was completed in August 1980 and was in use up to 1984 at which time it was deactivated.

18. In 1980, the State ordered Chemtronics to discontinue all discharges to these disposal pits/trenches. The pits have been subsequently back-filled in accordance with relevant RCRA landfill closure standards as part of activities conducted pursuant to CERCLA.

19. The Site has been the subject of two EPA Region 4 investigations, an investigation by the U.S. Army and an emergency response action by EPA Region 4. In June 1980, groundwater, surface water, sediment, and waste samples were collected for analysis. In April 1984, private water supply wells in the vicinity of the Site were sampled. In September 1984, the U.S. Army Toxic and Hazardous Materials Agency "(USATHAMA)" collected samples from two drums exposed at the Site. These two drums were suspected of containing wastes from the production of the chemical warfare agent BZ. Although no BZ was found, in January 1985, an immediate removal of the same two exposed drums was initiated by EPA due to the heightened public awareness/involvement with the Site. The drums were sampled and then transported to GSX, Pinewood facility, South Carolina, for disposal.

20. Contamination found in the soils of the disposal areas during these initial investigations included: toluene, 1,2-dichloroethane, 1,3,5-trinitro-1,3,5-triazine ("RDX"), trinitrotoluene ("TNT"), CS, benzylic acid/benzophenone, trans-1,2-dichloroethene, ethylbenzene, picric acid, orthochlorobenzaldehyde, trichloroethylene ("TCE"), chloroform, several other volatile organics in lower concentrations, and lead. Contaminants found in the groundwater during the initial investigations included: picric acid, TCE, 1,2-dichloroethane, RDX, ethylbenzene, trans-1,2-dichloroethene, and benzene.

21. The Chemtronics Superfund Site was listed on the National Priorities List ("NPL") pursuant to CERCLA Section 105, 42 U.S.C. § 9605, in December 1982.

22. In October 1985, Chemtronics and Northrop Corporation entered into an Administrative Order on Consent with EPA to perform a RI/FS with respect to certain waste disposal areas at the Site. Hoechst-Celenase declined to participate in the RI/FS process. A

predecessor of Hoechst-Celanese was a former Site owner and operator during 1959 through 1965.

23. The RI identified volatile organic compounds ("VOCs") and semi volatile organic compounds ("SVOCs"), explosives, metals, inorganic compounds and specialty chemicals in soil and groundwater in the vicinity of the waste disposal areas. Multiple chemicals were detected in groundwater at concentrations in excess of the corresponding Maximum Contaminant Levels ("MCLs") established pursuant to the Safe Drinking Water Act, 42 U.S.C. §§ 300(f) *et seq.* EPA approved the RI in April 1987 and the FS in March 1988.

24. Some of the compounds identified in soil and groundwater during the RI are known animal and human carcinogens and other identified compounds are probable animal and human carcinogens. TCE, a VOC, for example can produce central nervous system depression and irritation of the eyes, nose and throat. Exposure to high concentrations of TCE may cause nausea and vomiting. It can also cause neurological impairment, liver and kidney damage, and, at high concentrations, death.

25. People could potentially become exposed to site related compounds by using groundwater wells, and extracting contaminated groundwater and through dermal contact with surface streams receiving discharge from impacted aquifers. Potential exposure pathways include ingestion from drinking contaminated water or eating contaminated fish, dermal absorption, and inhalation of VOCs stripped from water during bathing and cooking.

26. The original ROD for the Site was signed on April 5, 1988, and an amendment to the ROD was issued on April 26, 1989.

27. On March 22, 1989, EPA issued a UAO to Chemtronics, Northrop Corporation and Hoechst-Celanese directing them to implement work specified by the ROD for the Site. The remedy for the Site involved leaving hazardous substances in place, capping the waste areas, and installing a groundwater extraction system. In response to the UAO, the PRPs have implemented the work specified in the ROD.

28. Remedial construction began in December 1991 and was completed in March 1993.

29. In August 2002, the United States Army Corps of Engineers issued a Five Year Review Report for the work at the Site. The purpose of the Five Year Review is to evaluate the remedy currently operating at the Site.

30. In 2007, EPA performed the second Five Year Review of the Site with assistance from the Respondents. That review incorporated Site data collected through 2006. The goals of this Five Year Review were to confirm whether the remedy specified in the ROD continues to protect human health and the environment and to evaluate whether the groundwater remediation levels ("GRLs") specified in the ROD remain protective of human health and the environment.

31. Historically, the Site has been subject to concurrent regulatory jurisdiction under both CERCLA and RCRA. The Site operated as a treatment, storage and disposal facility from

1980 through 1984. In 1990, EPA completed a RCRA Facility Assessment ("RFA") at the Site, which uncovered various SWMUs and several ACs at the Site. In 1997, Chemtronics entered into the NCAOC with the State of North Carolina Department of Environment, Health and Natural Resources, the predecessor agency to the DENR, to address RCRA concerns at the Site. RCRA actions at the Site, under DENR's supervision, have consisted of various investigation and assessment activities as well as cleaning and closing sumps. In performing this Work, the Respondents allege that they have made satisfactory progress in meeting their obligations under the NCAOC, and all Work performed under the NCAOC shall be incorporated within the Work performed hereunder.

32. Additional work needs to be done at the Site to address contamination associated with the SWMUs and ACs identified in Paragraph 11. y. above, which to some extent, is commingling with contaminant plumes associated with the CERCLA waste disposal areas addressed by the 1988 ROD and the 1989 amendment to the ROD.

33. The contaminants associated with the identified SWMUs and ACs are commingling with CERCLA Site-related waste streams in the front valley to impact the Site groundwater, which may eventually reach Bee Tree Creek.

34. In 2003, the Respondents prepared the HSMP to provide for a holistic, site-wide, approach for addressing conditions at the Site in a comprehensive fashion under a single regulatory program. Initially, the Respondents intended to consolidate Site activities under the RCRA program administered by DENR. However, on March 9, 2007, DENR requested that EPA consolidate oversight of all Site environmental remediation activities under EPA's CERCLA authority, and relinquished its RCRA oversight responsibilities for the Site to EPA's CERCLA program.

VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, EPA has determined that:

35. The Chemtronics Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

36. The contamination found at the Site, as identified in the Findings of Fact above, includes hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and solid waste, as defined in Section 6903 (27) of RCRA, 42 U.S.C.A. § 6903 (27), that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA.

37. The conditions described in the Findings of Fact above constitute an actual and/or threatened "release" of a hazardous substance from the facility as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

38. Each Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

39. Respondents are responsible parties under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622.

a. Each Respondent is a person who either generated the hazardous substances found at the Site, is a person who at the time of disposal of any hazardous substances owned or operated the Site, or is a person who arranged for disposal or transport for disposal of hazardous substances at the Site. Each Respondent therefore may be liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

b. Chemtronics is the current "owner" and/or "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

c. Respondents were the "owners" and/or "operators" of the facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

40. The actions required by this Settlement Agreement are necessary to protect the public health, welfare or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

41. EPA has determined that Respondents are qualified to conduct the RI/FS within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the Work properly and promptly, in accordance with Sections 104(a) and 122(a) of CERCLA, 42 U.S.C. §§ 9604(a) and 9622(a), if Respondents comply with the terms of this Settlement Agreement.

VII. SETTLEMENT AGREEMENT AND ORDER

42. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, it is hereby Ordered and Agreed that Respondents shall comply with all provisions of this Settlement Agreement, including, but not limited to, all appendices to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

43. Selection of Contractors, Personnel. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. Respondents have selected Altamont Environmental, Inc., of Asheville, North Carolina ("Altamont"), a North Carolina corporation, as the contractor to be used in carrying out Work at the Site. Within 30 days of the Effective Date of this Settlement Agreement, and before the Work outlined below begins, Respondents shall notify EPA in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories to be used in

carrying out such Work. With respect to any other proposed contractor, Respondents shall demonstrate that the proposed contractor has a quality system which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001 or subsequently issued guidance documents) or equivalent documentation as determined by EPA. The qualifications of any persons undertaking the Work for Respondents shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. This Settlement Agreement is contingent on Respondents' demonstration to EPA's satisfaction that Respondents are qualified to perform properly and promptly the actions set forth in this Settlement Agreement. If EPA disapproves in writing of any person's technical qualifications, Respondents shall notify EPA of the identity and qualifications of the replacements within 30 days of the written notice. If EPA subsequently disapproves of the replacement, EPA reserves the right to terminate this Settlement Agreement and to conduct a complete RI/FS, and to seek reimbursement for costs and penalties from Respondents. During the course of the RI/FS, Respondents shall notify EPA in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

44. Respondents designated Stuart Ryman of Altamont as the Project Coordinator who shall be responsible for administration of all actions by Respondents required by this Settlement Agreement. Respondents shall submit to EPA the designated Project Coordinator's qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site Work. EPA retains the right to disapprove of any designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number and qualifications within 7 days following EPA's disapproval. Respondents shall have the right to change their Project Coordinator, subject to EPA's right to disapprove. EPA's approval of the Project Coordinator will not be unreasonably withheld. Respondents shall notify EPA 7 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. Receipt by Respondents' Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondents. EPA shall direct all submissions required by this Settlement Agreement to the Project Coordinator at 50 College Street, Asheville, North Carolina 28801, phone number (828) 281-3350.

45. EPA has designated Jon Bornholm, of the Superfund Waste Division, Region 4 as the EPA Remedial Project Manager ("RPM"). EPA will notify Respondents of a change of its designated RPM. Except as otherwise provided in this Settlement Agreement, Respondents shall direct all submissions required by this Settlement Agreement to the RPM at 61 Forsyth Street, Atlanta, GA 30303.

46. EPA's RPM shall have the authority lawfully vested in an RPM and On-Scene Coordinator ("OSC") by the NCP. In addition, EPA's RPM shall have the authority consistent with the NCP, to halt any Work required by this Settlement Agreement, and to take any necessary response action when s/he determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the RPM from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

47. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). Such person shall have the authority to observe Work and make inquiries in the absence of EPA, but not to modify the RI/FS Work Plan.

IX. WORK TO BE PERFORMED

48. Activities and Deliverables. Respondents shall conduct activities and submit plans, reports or other deliverables as provided in Appendix B, the SOW, which is incorporated by reference, for the development of the RI/FS. All such Work shall be conducted in accordance with the provisions of this Settlement Agreement, the SOW, CERCLA, the NCP and EPA guidance documents, including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance documents), "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance documents), and guidance documents referenced therein, and guidance documents referenced in the SOW, as may be amended or modified by EPA. The general activities that Respondents are required to perform are identified below, followed by a list of plans, reports and other deliverables. The tasks that Respondents must perform are described more fully in the SOW and guidance documents. The activities, plans, reports and other deliverables identified below shall be developed as provided in the RI/FS Work Plan and Sampling and Analysis Plan, and shall be submitted to EPA as specified. All Work performed under this Settlement Agreement shall be in accordance with the schedules herein or established in the SOW, and in full accordance with the standards, specifications, and other requirements of the RI/FS Work Plan and Sampling and Analysis Plan; as initially approved or modified by EPA, and as may be amended or modified by EPA from time to time. In accordance with the schedules established in this Settlement Agreement or in the SOW, Respondents shall submit to EPA four (4) copies of all plans, reports and other deliverables required under this Settlement Agreement, the SOW and the RI/FS Work Plan. All plans; reports and other deliverables will be reviewed and approved by EPA pursuant to Section X (EPA Approval of Plans and other Submissions). Upon EPA's request, Respondents shall also provide copies of plans, reports or other deliverables to Community Advisory Groups, Technical Assistance Grant recipients or any other entities as directed by EPA. Upon request by EPA, Respondents shall submit in electronic form all portions of any plan, report or other deliverable Respondents are required to submit pursuant to provisions of this Settlement Agreement. Environmental related data generated by this RI/FS shall be submitted to EPA in an electronic data deliverable (EDD) that will allow this data to be downloaded into EPA Region 4's Data Management System.

a. Scoping. EPA will determine the Site-specific objectives of the RI/FS and devise a general management approach for the Site, as stated in Appendix B, the SOW. Respondents shall conduct the remainder of scoping activities as described in the attached SOW and referenced guidance documents. At the conclusion of the project planning phase, Respondents shall provide EPA with the following plans, reports and other deliverables:

(1) RI/FS Work Plan. Within 150 days after the Effective Date of this Settlement Agreement, Respondents shall submit to EPA a complete RI/FS Work Plan. Upon its approval by EPA pursuant to Section X (EPA Approval of Plans and Other Submissions), the RI/FS Work Plan shall be incorporated into and become enforceable under this Settlement Agreement.

(2) Sampling and Analysis Plan. Within 150 days after the Effective Date of this Settlement Agreement, Respondents shall submit a Sampling and Analysis Plan to EPA for review and approval pursuant to Section X (EPA Approval of Plans and Other Submissions). This plan shall consist of a Field Sampling Plan ("FSP") and a Quality Assurance Project Plan ("QAPP"), as described in the Statement of Work and guidance documents, including, without limitation, "EPA Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-02/009, December 2002 or subsequently issued guidance documents), and "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA 240/B-01/003, March 2001 or subsequently issued guidance documents). Upon its approval by EPA pursuant to Section X (EPA Approval of Plans and Other Submissions), the Sampling and Analysis Plan shall be incorporated into and become enforceable under this Settlement Agreement.

(3) Site Health and Safety Plan. Within 150 days after the Effective Date of this Settlement Agreement, Respondents shall submit for EPA review and comment a Site Health and Safety Plan that ensures the protection of on-site workers and the public during performance of on-site Work under this Settlement Agreement. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992 or subsequently issued guidance documents). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondents shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the RI/FS.

b. Community Relations Plan. EPA will prepare a community relations plan, in accordance with EPA guidance documents and the NCP. As requested by EPA, Respondents shall provide information supporting EPA's Community Relations Plan and shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site.

c. Technical Assistance Plan. Within 30 days of a request by EPA, Respondents shall provide EPA with a Technical Assistance Plan ("TAP") for providing and administering up to \$50,000 of Respondents' funds to be used by a qualified community group to hire independent technical advisers during the Work conducted pursuant to this Settlement Agreement. The TAP shall state that Respondents will provide and administer additional reasonable amounts needed if EPA, in its discretion, determines that the selected community group has demonstrated such a

need prior to EPA's issuance of the ROD contemplated by this Settlement Agreement. Upon its approval by EPA pursuant to Section X (EPA Approval of Plans and Other Submissions), the TAP shall be incorporated into and become enforceable under this Settlement Agreement.

d. Site Characterization. Following EPA approval or modification of the RI/FS Work Plan and Sampling and Analysis Plan, Respondents shall implement the provisions of these plans to characterize the Site. Respondents shall complete Site characterization and submit all plans, reports and other deliverables in accordance with the schedules and deadlines established in this Settlement Agreement, the SOW, and/or the EPA-approved RI/FS Work Plan and Sampling and Analysis Plan.

e. Reuse Assessment. If EPA, in its sole discretion, determines that a Reuse Assessment is necessary, Respondents will perform the Reuse Assessment in accordance with the SOW, RI/FS Workplan and applicable guidance documents. The Reuse Assessment should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for the Site. Respondents shall prepare the Reuse Assessment in accordance with EPA guidance documents, including, but not limited to: "Reuse Assessments: A Tool To Implement The Superfund Land Use Directive," OSWER Directive 9355.7-06P, June 4, 2001 or subsequently issued guidance documents.

f. Baseline Human Health Risk Assessment and Ecological Risk Assessment. Respondents will perform the Baseline Human Health Risk Assessment and Ecological Risk Assessment ("Risk Assessments") in accordance with the SOW, RI/FS Work Plan and applicable EPA guidance documents, including but not limited to: "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part A)," (RAGS, EPA-540-1-89-002, OSWER Directive 9285.7-01A, December 1989); "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments)," (RAGS, EPA 540-R-97-033, OSWER Directive 9285.7-01D, January 1998); "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments" (ERAGS, EPA-540-R-97-006, OSWER Directive 9582.7-25, June 1997) or subsequently issued guidance documents.

g. Draft Remedial Investigation Report. As set forth in the SOW the Respondents shall submit to EPA for review and approval pursuant to Section X (EPA Approval of Plans and Other Submissions), a Draft Remedial Investigation Report consistent with the SOW, RI/FS Work Plan, and Sampling and Analysis Plan. The Draft RI Report shall also contain the Risk Assessments.

h. Treatability Studies. Respondents shall conduct treatability studies as necessary to assist in the detailed analysis of alternatives. The major components of the treatability studies are described in the SOW. Respondents shall conduct any necessary treatability studies in accordance with the process set forth in the SOW and the EPA approved work plan. Any such treatability studies or related pilot projects may be integrated with ongoing remedial activities at the Site.

i. Development and Screening of Alternatives. Respondents shall develop an appropriate range of waste management options that will be evaluated through the development and screening of alternatives, as provided in the SOW, and the EPA approved RI/FS Work Plan.

j. Detailed Analysis of Alternatives. Respondents shall conduct a detailed analysis of remedial alternatives, as provided in the SOW, and the EPA approved RI/FS Work Plan.

k. Draft Feasibility Study Report. In accordance with the schedule set forth in the SOW, Respondents shall submit to EPA a Draft Feasibility Study Report which reflects the findings in the Remedial Investigation Report and Risk Assessments and documents the findings of the work described in paragraphs 48. h., 48. i and 48. j. Respondents shall refer to Table 6-5 of the RI/FS Guidance Document for report content and format. The report as amended, and the administrative record, shall provide the basis for the proposed plan under CERCLA Sections 113(k) and 117(a) by EPA, and shall document the development and analysis of remedial alternatives.

49. Upon receipt of the draft FS report, EPA will evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial alternative has been completed and will evaluate the durability, reliability and effectiveness of any proposed Institutional Controls.

50. Modification of the RI/FS Work Plan.

a. If at any time during the RI/FS process, Respondents identify a need for additional data, Respondents shall submit a memorandum documenting the need for additional data to the RPM within 30 days of identification. EPA in its discretion will determine in a timely manner whether the additional data will be collected by Respondents and whether it will be incorporated into plans, reports and other deliverables.

b. In the event of unanticipated or changed circumstances at the Site, Respondents shall notify the RPM by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In the event that EPA determines that the immediate threat or the unanticipated or changed circumstances warrant changes in the RI/FS Work Plan, EPA shall modify or amend the RI/FS Work Plan in writing accordingly. Respondents shall perform the RI/FS Work Plan as modified or amended.

c. EPA may determine that in addition to tasks defined in the initially approved RI/FS Work Plan, other additional Work may be necessary to accomplish the objectives of the RI/FS. Respondents agree to perform these response actions in addition to those required by the initially approved RI/FS Work Plan, including any approved modifications, if EPA determines that such actions are necessary for a complete RI/FS.

d. Respondents shall confirm their willingness to perform the additional Work in writing to EPA within 7 days of receipt of the EPA request. If Respondents object to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondents may

seek dispute resolution pursuant to Section XV (Dispute Resolution). The SOW and/or RI/FS Work Plan shall be modified in accordance with the final resolution of the dispute.

e. Respondents shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the RI/FS Work Plan or written RI/FS Work Plan supplement. EPA reserves the right to conduct the Work itself at any point, to seek reimbursement from Respondents, and/or to seek any other appropriate relief.

f. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions at the Site.

51. Off-Site Shipment of Waste Material. Respondents shall, prior to any off-site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to EPA's Designated RPM. However, this notification requirement shall not apply to any off-site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

a. Respondents shall include in the written notification the following information: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. Respondents shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondents following the award of the contract for the remedial investigation and feasibility study. Respondents shall provide the information required by Subparagraph 51.a and 51.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

c. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondents shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondents shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

52. Meetings. Respondents shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

53. Progress Reports. In addition to the plans, reports and other deliverables set forth in this Settlement Agreement, Respondents shall provide to EPA via e-mail or facsimile monthly progress reports by the 10th day of the following month. At a minimum, with respect to the preceding month, these progress reports shall (1) describe the actions which have been taken to comply with this Settlement Agreement during that month, (2) include all validated results of sampling and tests and all other data received by Respondents, (3) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for RI/FS completion, and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

54. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action. Respondents shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan in the Settlement Agreement to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also, within 24 hours, notify the RPM, Jon Bornholm, and the Regional Duty Officer, Emergency Planning and Response Branch, EPA Region 4 at 404-562-8700, and the EPA Region 4 Regional Emergency 24 hour telephone number at 800-424-8802, of the incident or Site conditions. In the event that Respondents fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondents shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XVIII (Payment of Response Costs).

b. In addition, in the event of any new release of a hazardous substance from the Site, Respondents shall immediately notify the RPM, the OSC or Regional Duty Officer at the Emergency Planning and Response Branch, EPA Region 4 at 404-562-8700 and the National Response Center at (800) 424-8802. Respondents shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.

X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

55. After review of any plan, report or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondents EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondents modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondents

at least one notice of deficiency and an opportunity to cure within 30 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

56. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 55, Respondents shall proceed to take any action required by the plan, report or other deliverable, as approved or modified by EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section XV (Dispute Resolution) with respect to the modifications or conditions made by EPA. Following EPA approval or modification of a submission or portion thereof, Respondents shall not thereafter alter or amend such submission or portion thereof unless directed by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Subparagraph 55 (c) and the submission had a material defect, EPA retains the right to seek stipulated penalties, as provided in Section XVI (Stipulated Penalties).

57. Resubmission.

a. Upon receipt of a notice of disapproval, Respondents shall, within 30 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI, shall accrue during the 30-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 58 and 59.

b. Notwithstanding the receipt of a notice of disapproval, Respondents shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondents of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

c. Respondents shall not proceed further with any subsequent activities or tasks until receiving EPA approval, approval on condition or modification of the following deliverables: RI/FS Work Plan and Sampling and Analysis Plan, Draft Remedial Investigation Report and Treatability Testing Work Plan and Sampling and Analysis Plan and Draft Feasibility Study Report. While awaiting EPA approval, approval on condition or modification of these deliverables, Respondents shall proceed with all other tasks and activities which may be conducted independently of these deliverables, in accordance with the schedule set forth under this Settlement Agreement.

d. For all remaining deliverables not listed above in subparagraph 57.c., Respondents shall proceed with all subsequent tasks, activities and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondents from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the RI/FS.

58. If EPA disapproves a resubmitted plan, report or other deliverable, or portion thereof, EPA may again direct Respondents to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report or other deliverable. Respondents shall implement any such

plan, report, or deliverable as corrected, modified or developed by EPA, subject only to Respondents' right to invoke the procedures set forth in Section XV (Dispute Resolution).

59. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondents shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately unless Respondents invoke the dispute resolution procedures in accordance with Section XV (Dispute Resolution) and EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by EPA or superseded by an agreement reached pursuant to that Section. The provisions of Section XV (Dispute Resolution) and Section XVI (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is not otherwise revoked, substantially modified or superseded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XV, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVI.

60. In the event that EPA takes over some of the tasks, but not the preparation of the RI Report or the FS Report, Respondents shall incorporate and integrate information supplied by EPA into the final reports.

61. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement shall, upon approval or modification by EPA, be incorporated into and enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and enforceable under this Settlement Agreement.

62. Neither failure of EPA to expressly approve or disapprove of Respondents' submissions within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Whether or not EPA gives express approval for Respondents' deliverables, Respondents are responsible for preparing deliverables acceptable to EPA.

XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION

63. Quality Assurance. Respondents shall assure that Work performed, samples taken and analyses conducted conform to the requirements of the SOW, the QAPP and guidance documents identified therein. Respondents will assure that field personnel used by Respondents are properly trained in the use of field equipment and in chain of custody procedures. Respondents shall only use laboratories which have a documented quality system that complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA.

64. Sampling.

a. All validated results of sampling, or analytical data or other validated data generated by Respondents, or on Respondents' behalf, during the period that this Settlement Agreement is effective, shall be submitted to EPA in the next monthly progress report as

described in Paragraph 53 of this Settlement Agreement. EPA will make available to Respondents validated data generated by EPA unless it is exempt from disclosure by any federal or state law or regulation.

b. Respondents shall verbally notify EPA and the State at least 3 days prior to conducting significant field events as described in the SOW, RI/FS Work Plan or Sampling and Analysis Plan. At EPA's verbal or written request, or the request of EPA's oversight assistant, Respondents shall allow split or duplicate samples to be taken by EPA (and its authorized representatives) of any samples collected in implementing this Settlement Agreement. All split samples of Respondents shall be analyzed by the methods identified in the QAPP.

65. Access to Information.

a. Respondents shall provide to EPA and the State, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA and the State, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

b. Respondents may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the State under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to EPA [and the State], or if EPA has notified Respondents that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondents. Respondents shall segregate and clearly identify all documents or information submitted under this Settlement Agreement for which Respondents assert business confidentiality claims.

c. Respondents may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondents assert such a privilege in lieu of providing documents, they shall provide EPA and the State with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondents. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

d. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

66. In entering into this Settlement Agreement, Respondents waive any objections to any data gathered, generated, or evaluated by EPA, the State or Respondents in the performance or oversight of the Work that has been verified according to the quality assurance/quality control ("QA/QC") procedures required by the Settlement Agreement or any EPA-approved RI/FS Work Plans or Sampling and Analysis Plans. If Respondents object to any other data relating to the RI/FS, Respondents shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within 15 days of the monthly progress report containing the data.

XII. SITE ACCESS AND INSTITUTIONAL CONTROLS

67. If the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by any of Respondents, such Respondents shall, commencing on the Effective Date, provide EPA, the State and their representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

68. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within 60 days after the Effective Date, or as otherwise specified in writing by the RPM. Respondents shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondents shall describe in writing their efforts to obtain access. If Respondents cannot obtain access agreements, EPA may either (i) obtain access for Respondents or assist Respondents in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate; (ii) perform those tasks or activities with EPA contractors; or (iii) terminate the Settlement Agreement. Respondents shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XVIII (Payment of Response Costs). If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondents shall perform all other tasks or activities not requiring access to that property, and shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondents shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports and other deliverables.

69. Within 90 days of EPA's approval of the RI, Chemtronics shall submit to EPA for review and approval a draft deed restriction covenant with respect to the estimated boundaries of the contaminated areas of the property, as follows:

- a. The draft model deed restriction covenant shall be substantially in the form attached hereto as Appendix D, shall run with the impacted portions of the Site, and shall be enforceable under the laws of the State of North Carolina.
- b. Along with the draft deed restriction covenant, Chemtronics shall provide a current title insurance commitment or some other evidence of title acceptable to EPA, which shows title to the land described in the easement to be free and clear of all prior liens and encumbrances (except when those liens or encumbrances are approved by EPA or when, despite best efforts, Chemtronics is unable to obtain release or subordination of such prior liens or encumbrances);
- c. The deed restriction covenant shall impose restrictions that EPA determines are necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed pursuant to this Settlement Agreement. Such restrictions may include, but are not limited to, the following: no installation of drinking water wells within the deed restricted area of the Site, no unauthorized activities or placement of structures on the capped areas (other than as part of appropriate cap maintenance and repairs), and no alteration of any signage placed on the Site.
- d. The deed restriction covenant shall provide that it is enforceable by (i) the State and its representatives, (ii) the other Respondents and their representatives, and/or (iii) other appropriate grantees.

70. Within 90 days after EPA's approval of the deed restriction covenant described in Paragraph 69, Chemtronics shall execute and record the deed restriction covenant in the Recorder's Office, or Registry of Deeds or other appropriate land records office of Buncombe County, North Carolina. The access rights and/or rights to enforce land/water use restrictions shall be granted to (i) the United States, on behalf of EPA, and its representatives, (ii) the State and its representatives, and/or (iii) the other Respondents and their representatives.

71. Notwithstanding any provision of this Settlement Agreement, EPA and the State retain all of their access authorities and rights, as well as all of their rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XIII. COMPLIANCE WITH OTHER LAWS

72. Respondents shall comply with all applicable local, state and federal laws and regulations when performing the RI/FS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work is to be conducted off-site and requires a federal or state permit or approval,

Respondents shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIV. RETENTION OF RECORDS

73. During the pendency of this Settlement Agreement and for a minimum of 6 years after commencement of construction of any remedial action, each Respondent shall preserve and retain all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 6 years after commencement of construction of any remedial action, Respondents shall also instruct their contractors and agents to preserve all documents, records, and other information of whatever kind, nature or description relating to performance of the Work.

74. At the conclusion of this document retention period, Respondents shall notify EPA at least 90 days prior to the destruction of any such documents, records or other information, and, upon request by EPA, Respondents shall deliver any such documents, records, or other information to EPA. Respondents may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondents assert such a privilege, they shall provide EPA with the following: 1) the title of the document, record, or other information; 2) the date of the document, record, or other information; 3) the name and title of the author of the document, record, or other information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or other information; and 6) the privilege asserted by Respondents. However, no documents, records or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

75. Each Respondent hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XV. DISPUTE RESOLUTION

76. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

77. If Respondents object to any EPA action taken pursuant to this Settlement Agreement, including, but not limited to, billings for Future Response Costs, they shall notify EPA in writing of their objection(s) within 15 days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondents shall have 30 days from EPA's receipt of Respondents' written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted verbally but must be confirmed in writing and promptly given.

78. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the EPA Superfund Division Director level or higher will issue a written decision. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondents' obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section unless EPA agrees otherwise. Following resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, as applicable, and regardless of whether Respondents agree with the decision. Any documents submitted by Respondents during the dispute resolution process shall become part of the administrative record.

XVI. STIPULATED PENALTIES

79. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 80 and 81 for failure to comply with any of the requirements of this Settlement Agreement specified below unless excused under Section XVII (Force Majeure). "Compliance" by Respondents shall include completion of the Work under this Settlement Agreement or any activities contemplated under any RI/FS Work Plan, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement, in accordance with all applicable requirements of law.

80. Stipulated Penalty Amounts.

a. The following stipulated penalties shall accrue per day for any noncompliance identified in Subparagraph 80 (b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,000.00	1 st through 14 th day
\$ 2,000.00	15 th through 30 th day
\$ 4,000.00	31 st day and beyond

b. Compliance Milestones. The Penalties listed in Subparagraph 80 (a) shall accrue per violation per day for failure to comply with Paragraphs 93, 94, 95, 111, 112.

81. Stipulated Penalty Amounts - Reports.

a. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports or other written documents pursuant to Paragraphs 48 (a)(1), 48(a)(2), 48(a)(3), 48 (b), 48(c), 48(d), 48(e), 48(f), 48(g), 48 (h), 48(i), 48(k), 53, 57(a), 59, 64, 67, 68, 69, and 70:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500.00	1 st through 14 th day
\$ 1,000.00	15 th through 30 th day
\$ 1,500.00	31 st day and beyond

82. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 100 of Section XX (Reservation of Rights by EPA), Respondents shall be liable for a stipulated penalty in the amount of \$1,000,000.

83. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. Respondents may dispute EPA's right to stipulated penalties by invoking the dispute resolution procedures under Section XV (Dispute Resolution) herein. However, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Section X (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondents of any deficiency; and (2) with respect to a decision by the EPA Management Official designated in Paragraph 78 of Section XV (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA Management Official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

84. Following EPA's determination that Respondents have failed to comply with a requirement of this Settlement Agreement, EPA shall give Respondents prompt written notification of the same and describe the noncompliance. EPA shall send Respondents a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of when EPA has notified Respondents of a violation.

85. Except as specified in Paragraph 57 of Section X (EPA Approval of Plans and Other Submissions), all penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondents' receipt from EPA of a demand for payment of the penalties, unless Respondents invoke the dispute resolution procedures in accordance with Section XV (Dispute

Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," and shall be mailed to:

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
PO Box 979076
St. Louis, MO 63197-9000

All payments must indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 0468, the EPA Docket Number, and the name and address of the party(ies) making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to EPA as provided in Paragraph 93, and to:

U.S. Environmental Protection Agency
Lucia C. Méndez
Region 4- EAD
61 Forsyth Street, S.W.
Atlanta, GA 30303

U.S. Environmental Protection Agency
Attn: Paula V. Painter
Region 4 - SEIMB
61 Forsyth Street, S.W.
Atlanta, GA 30303

86. The payment of penalties shall not alter in any way Respondents' obligation to complete performance of the Work required under this Settlement Agreement.

87. Penalties shall continue to accrue as provided in Paragraphs 80, 81, and 83 during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

88. If Respondents fail to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondents shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 85.

89. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondents' violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of willful violation

of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 100. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XVII. FORCE MAJEURE

90. Respondents agree to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, *force majeure* is defined as any event arising from causes beyond the control of Respondents or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondents' best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

91. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondents shall notify EPA orally within 5 days of when Respondents first knew that the event might cause a delay. Within 3 days thereafter, Respondents shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondents' rationale for attributing such delay to a *force majeure* event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondents, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondents from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

92. If EPA agrees that a delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation, except that EPA may take such event into account in determining the appropriate time for performance of any such obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondents in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondents in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. PAYMENT OF RESPONSE COSTS

93. Payment of Past Response Costs.

a. Within 30 days after the Effective Date, Respondents shall make payment to EPA in the amount of \$ 141,041.96 in full satisfaction of all Past Response Costs. Payment shall be made to EPA by Electronic Funds Transfer ("EFT") in accordance with current EFT procedures to be provided to Respondents by EPA Region 4, and shall be accompanied by a statement identifying the name and address of the party(ies) making payment, the Site name, the EPA Region and Site/Spill ID Number 0468, and the EPA docket number for this action. Electronic payments or wire transfers shall be sent to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read "D 68010727
Environmental Protection Agency"

b. At the time of payment, Respondents shall send notice that payment has been made to:

U. S. Environmental Protection Agency
Attn: Paula V. Painter
Region 4 - SEIMB
61 Forsyth Street, S.W.
Atlanta, GA 30303

c. The total amount to be paid by Respondents pursuant to Subparagraph 93 (a) shall be deposited in the Chemtronics Superfund Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

94. Payments of Future Response Costs.

a. Respondents shall pay EPA all Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Respondents a bill requiring payment that includes a SCORPIOS Report, which includes direct and indirect costs incurred by EPA and its contractors. Respondents shall make all payments within 30 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 96 of this Settlement Agreement. Respondents shall make all payments required by this Paragraph by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the

party(ies) making payment and EPA Site/Spill ID number 0468. Respondents shall send the check(s) to:

U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St. Louis, MO 63197-9000

b. At the time of payment, Respondents shall send notice that payment has been made to:

U. S. Environmental Protection Agency
Attn: Paula V. Painter
Region 4 - SEIMB
61 Forsyth Street, S.W.
Atlanta, GA 30303

c. The total amount to be paid by Respondents pursuant to Subparagraph 94(a) shall be deposited in the Chemtronics Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

95. If Respondents do not pay Past Response Costs within 30 days of the Effective Date, or do not pay Future Response Costs within 30 days of Respondents' receipt of a bill, Respondents shall pay Interest on the unpaid balance of Past Response Costs and Future Response Costs, respectively. The Interest on unpaid Past Response Costs shall begin to accrue 30 days subsequent to the Effective Date and shall continue to accrue until the date of payment. The Interest on unpaid Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. If EPA receives a partial payment, Interest shall accrue on any unpaid balance. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section, including but not limited to, payments of stipulated penalties pursuant to Section XVI. Respondents shall make all payments required by this Paragraph in the manner described in Paragraph 94.

96. Respondents may contest payment of any Future Response Costs under Paragraph 94 if they determine that EPA has made an accounting error or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with the NCP. Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to the EPA RPM. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondents shall within the 30 day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 94. Simultaneously, Respondents shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of North Carolina and remit to that escrow

account funds equivalent to the amount of the contested Future Response Costs. Respondents shall send to the EPA RPM a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Respondents shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If EPA prevails in the dispute, within 5 days of the resolution of the dispute, Respondents shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 94. If Respondents prevail concerning any aspect of the contested costs, Respondents shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to EPA in the manner described in Paragraphs 93 and 94. Respondents shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondents' obligation to reimburse EPA for its Future Response Costs.

XIX. COVENANT NOT TO SUE BY EPA

97. In consideration of the actions that will be performed and the payments that will be made by Respondents under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondents pursuant to Sections 106, 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), and Section 7003 of RCRA, 42 U.S.C. § 6973, for the Work, Past Response Costs, and Future Response Costs. This covenant not to sue shall take effect upon receipt by EPA of the Past Response Costs due under Section XVIII of this Order and any Interest or Stipulated Penalties due for failure to pay Past Response Costs as required by Sections XVIII and XVI of this Order. This covenant not to sue is conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Order, including, but not limited to, payment of Future Response Costs pursuant to Section XVIII. This covenant not to sue extends only to Respondents and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

98. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or perform all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

99. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement

Agreement is without prejudice to, all rights against Respondents with respect to all other matters, including, but not limited to:

- a. claims based on a failure by Respondents to meet a requirement of this Settlement Agreement;
- b. liability for costs not included within the definitions of Past Response Costs or Future Response Costs;
- c. liability for performance of response action other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and
- g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site.

100. Work Takeover. In the event EPA determines that Respondents have ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in their performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondents may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by EPA in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay pursuant to Section XVIII (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENTS

101. Respondents covenant not to sue and agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Past Response Costs, Future Response Costs, or this Settlement Agreement, including, but not limited to:

- a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of the Work or arising out of the response actions for which the Past Response Costs or Future Response Costs have or will be incurred, including any claim under the United States Constitution, the State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work or payment of Past Response Costs or Future Response Costs (other than a claim based on the actions of any United States defense agency or military department which would establish liability under Section 107(a) of CERCLA).

102. Nothing in this Settlement Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

103. Respondents reserve all rights they may have to oppose and defend against any and all claims and actions asserted by EPA or the United States pursuant to Paragraphs 98 and 99 hereof, and to assert any and all defenses they may have. In addition, nothing set forth in this Settlement Agreement shall preclude the Respondents from asserting any defense in any action by EPA or the United States to enforce this Settlement Agreement.

XXII. OTHER CLAIMS

104. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents.

105. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

106. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. CONTRIBUTION

107. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondents are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work, Past Response Costs, and Future Response Costs.

The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondents have, as of the Effective Date, resolved their liability to the United States for the Work, Past Response Costs, and Future Response Costs.

XXIV. INDEMNIFICATION

108. Respondents shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action arising from, or on account of negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondents agree to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondents in carrying out activities pursuant to this Settlement Agreement. Neither Respondents nor any such contractor shall be considered an agent of the United States.

109. The United States shall give Respondents prompt notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondents prior to settling such claim.

110. Respondents waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person for performance of Work on or relating to the Site. In addition, Respondents shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person for performance of Work on or relating to the Site.

XXV. INSURANCE

111. At least 20 days prior to commencing any On-Site Work under this Settlement Agreement, Respondents shall secure, and shall maintain for the duration of this Settlement Agreement, commercial general liability insurance with limits of \$1.3 million per claim and \$1.3 million annual aggregate and automobile insurance with a combined single limit of \$1.3 million, including the EPA as an additional insured as its interests may appear with respect to Respondents' liability associated with this Settlement Agreement. Within the same period, Respondents shall provide EPA with certificates of such insurance evidencing the coverages required herein. Respondents shall submit such certificates each year on the anniversary of the Effective Date for the duration of the Settlement Agreement. In addition, for the duration of the

Settlement Agreement, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondents in furtherance of this Settlement Agreement. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

112. As an initial matter, \$1.3 million represents EPA's projection of costs for the Work to be performed pursuant to the Settlement Agreement. Within 30 days of the Effective Date, Respondents shall establish and maintain financial security for the benefit of EPA in the amount of \$1.3 million in one or more of the following forms, to secure the full and final completion of Work by Respondents:

- a. a surety bond unconditionally guaranteeing payment and/or performance of the RI/FS Work;
- b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the RI/FS Work;
- c. a trust fund administered by a trustee acceptable in all respects to EPA;
- d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the RI/FS Work;
- e. a corporate guarantee to perform the RI/FS Work provided by one or more parent corporations or subsidiaries of Respondents, or by one or more unrelated corporations that have a substantial business relationship with at least one of Respondents; including a demonstration that any such company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or
- f. a corporate guarantee to perform the RI/FS Work by one or more of Respondents, including a demonstration that any such Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

113. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondents shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 112, above. In addition, if at any time EPA notifies Respondents that the anticipated cost of

completing the RI/FS Work has increased, then, within 30 days of such notification, Respondents shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondents' inability to demonstrate financial ability to complete the RI/FS Work shall in no way excuse performance of any activities required under this Settlement Agreement.

114. If Respondents seek to ensure completion of the Work through a guarantee pursuant to Subparagraph 112.e. or 112.f. of this Settlement Agreement, Respondents shall (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the current cost estimate of \$1.3 million for the RI/FS Work at the Site shall be used in relevant financial test calculations.

115. If, after the Effective Date, Respondents can show that the estimated cost to complete the remaining RI/FS Work has diminished below the amount set forth in Paragraph 114 of this Section, Respondents may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining RI/FS Work to be performed. Respondents shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondents may seek dispute resolution pursuant to Section XV (Dispute Resolution). Respondents may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

116. Respondents may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondents may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

XXVII. INTEGRATION/APPENDICES

117. This Settlement Agreement and its appendices, and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc., that will be developed pursuant to this Settlement Agreement and become incorporated into and enforceable under this Settlement Agreement constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement:

"Appendix A" is the legal description of the Site property specifying the property boundaries.

"Appendix B" is the SOW.

"Appendix C" is the map of the Site.

"Appendix D" is the Draft Deed Restriction.

XXVIII. ADMINISTRATIVE RECORD

118. EPA will determine the contents of the administrative record file for selection of the remedial action. Respondents shall submit to EPA documents developed during the course of the RI/FS upon which selection of the response action may be based. Upon request of EPA, Respondents shall provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports and other reports. Upon request of EPA, Respondents shall additionally submit any previous studies conducted under state, local or other federal authorities relating to selection of the response action, and all communications between Respondents and state, local or other federal authorities concerning selection of the response action. At EPA's discretion, Respondents shall establish a community information repository at or near the Site, to house one copy of the administrative record.

XXIX. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

119. This Settlement Agreement shall be effective 2 days after the Settlement Agreement is signed by the Regional Administrator or his/her delegatee.

120. This Settlement Agreement may be amended by mutual agreement of EPA and Respondents. Amendments shall be in writing and shall be effective when signed by EPA. RPMs do not have the authority to sign amendments to the Settlement Agreement.

121. No informal advice, guidance, suggestion, or comment by the RPM or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXX. NOTICE OF COMPLETION OF WORK

122. When EPA determines that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to payment of Past Response Costs, Future Response Costs or record retention, EPA will provide written timely notice to Respondents. Satisfaction of the Work obligations under this Settlement Agreement shall be deemed to satisfy all of the respective obligations under RCRA, 42 U.S.C. §§ 6901 *et seq.*, and the Parties acknowledge that the Settlement Agreement and the Appendices attached hereto and

incorporated by reference shall govern with respect to any and all matters addressed under this Agreement. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondents, provide a list of the deficiencies, and require that Respondents modify the RI/FS Work Plan if appropriate to correct such deficiencies, in accordance with Paragraph 50 (Modification of the Work Plan). Failure by Respondents to implement the approved modified RI/FS Work Plan shall be a violation of this Settlement Agreement, but shall be subject to their right to invoke the dispute resolution procedures set forth in Section XV (Dispute Resolution).

Agreed to by the Respondents as of the dates indicated below.

[signatures appear on separate following pages]

For Respondent CHEMTRONICS, INC.

By: 

Title: PRESIDENT

Date: 9/23/2008

For Respondent NORTHROP GRUMMAN SYSTEMS CORPORATION

By: 

Title: CORPORATE DIRECTOR, ENVIRONMENTAL REMEDIATION

Date: 9/29/2008

For Respondent CNA HOLDINGS, INC.

By: Miguel A. Desdin
Miguel A. Desdin

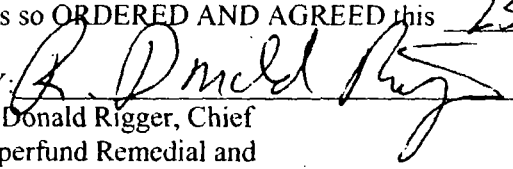


Title: Vice President

Date: 10-1-08

It is so ORDERED AND AGREED this 23rd day of October, 2008.

BY:


R. Donald Rigger, Chief
Superfund Remedial and
Site Evaluation Branch
Region 4

DATE: 23-OCT-2008

EFFECTIVE DATE: 10-25-08

APPENDIX A

**Legal Description for the Chemtronics, Inc. Superfund Site
180 Old Bee Tree Road
Swannanoa, Buncombe County, North Carolina
EPA ID# NCD095459392**

The Chemtronics, Inc. Superfund Site encompasses the property located in Buncombe County, North Carolina having the following legal description:

IN SWANNANOA TOWNSHIP.

BEGINNING at a point in the center line of Old Bee Tree Road, a corner of that property conveyed to George W. Beverly, Jr., and W. Neal Hanks, by deed recorded in Deed Book 1201 at Page 501, in the Office of the Register of Deeds of Buncombe County, North Carolina, which point and corner are located North 9 deg. 54 min. 36 sec. East 409.59 feet (measured along and with the center line of Old Bee Tree Road) from the Northwest corner of that property conveyed by the Grantor herein to M. Lowenstein & Sons, Inc., by deed recorded in Deed Book 1040 at Page 325, in the Office of the Register of Deeds of Buncombe County, North Carolina, and runs thence from the beginning point thus established and with the center line of Old Bee Tree Road, North 9 deg. 54 min. 36 sec. East 676.01 feet, more or less, to a point in the center line of Old Bee Tree Road at Rector's Northeast corner; thence leaving Old Bee Tree Road, South 88 deg. 57 min. West 308.26 feet to a concrete monument (formerly an iron pin); thence North 3 deg. 58 min. East 114.73 feet to a concrete monument (formerly an iron pin); thence North 89 deg. 36 min. West 1,976.58 feet to a concrete monument; thence North 14 deg. 55 min. West 163.05 feet to an iron pin; thence North 17 deg. 30 min. West 188.35 feet to an iron pin; thence North 27 deg. 13 min. West 247.97 feet to an iron pin; thence North 62 deg. 36 min. West 217.87 feet to a concrete monument; thence North 27 deg. 21 min. West 372.41 feet to a concrete monument; thence North 9 deg. 13 min. West 354.28 feet to a concrete monument; thence North 5 deg. 15 min. West 292.60 feet to a concrete monument at a large pine stump; thence North 35 deg. 45 min. 30 sec. East 1,192.00 feet to a concrete monument; thence North 22 deg. 59 min. 30 sec. East 1,011.98 feet to a concrete monument; thence North 30 deg. 28 min. West 556.31 feet to a concrete monument at a set stone in Joyner's line; thence North 74 deg. 53 min. West 510.35 feet to a white walnut; thence North 11 deg. West 371.20 feet to an iron pin; thence North 38 deg. 51 min. East 175.84 feet to an iron pin; thence North 11 deg. 19 min. West 168.69 feet to a concrete monument at a stake in a mountain oak stump; thence North 44 deg. 4 min. West 175.90 feet to an iron pin; thence North 29 deg. 39 min. West 8.39 feet to an iron pin; thence North 32 deg. 30 min. West 511.19 feet to a concrete monument; thence North 25 deg. 54 min. East 255.10 feet to an iron pin; thence North 29 deg. 22 min. East 214.54 feet to an iron pin; thence North 16 deg. 45 min. East 275.09 feet to an iron pin; thence North 39 deg. 30 min. East 215.92 feet to an iron pin; thence North 17 deg. 49 min. East 50.20 feet to an iron pin; thence North 21 deg. 36 min. East 223.60 feet to an iron pin; thence North 23 deg. 3 min. East 133.66 feet to an iron pin; thence North 46 deg. 17 min. East 98.11 feet to an iron pin; thence North 34 deg. East 238.31 feet to an iron pin; thence North 19 deg. 49 min. East 174.31 feet to a concrete monument; thence North 47 deg. 4 min. East 356.68 feet to a concrete monument at U.S. Government corner No. 17; thence North 51 deg. East 327.65 feet to an iron pin; thence North 53 deg. 39 min. East 30 feet to an iron pin; thence North 37 deg. 19 min. East 154.44 feet to an iron pin; thence North 33 deg. 36 min. East 165.66 feet to an iron pin; thence North 22 deg. 3 min. East 138.60 feet to an iron pin; thence North 26 deg. 14 min. East 190.74 feet to an iron pin; thence North 39 deg. 34 min. East 89.10 feet to an iron pin; thence North 38 deg. 39 min. East 138.60 feet to a concrete monument at U.S. Government corner No. 16; thence North 6 deg. 40 min. East 1,174.14 feet to a concrete monument at U.S. Government corner No. 15; thence South 58 deg. 48 min. East 595.32 feet to a concrete monument at U.S. Government corner No. 14; thence North 47 deg. 6 min. East 1703.46 feet to a concrete monument at U.S. Government corner No. 13; thence South 27 deg. 52 min. East 2288.22 feet to a concrete monument at U.S. Government corner No. 12 in the center line Old Millrock Road; thence with the center line of Old Millrock Road, the following nineteen (19) courses and distances:

North 85 deg. 42 min. East 279.18 feet to an iron pin; thence North 62 deg. 29 min. East 161.04 feet to an iron pin; thence North 41 deg. 40 min. East 87.78 feet to a concrete monument at U.S. Government corner No. 11; thence North 5 deg. 45 min. West 141.24 feet to an iron pin; thence North 7 deg. 22 min. East 116.82 feet to a concrete monument at U.S. Government corner No. 10; thence North 81 deg. 17 min. East 197.34 feet to an iron pin; thence North 54 deg. 17 min. East 88.44 feet to an iron pin; thence North 79 deg. 50 min. East 132 feet to an iron pin; thence North 49 deg. 58 min. East 60.06 feet to an iron pin; thence North 20 deg. 58 min. East 69.96 feet to an iron pin; thence North 44 deg. 38 min. East 59.40 feet to an iron pin; thence North 88 deg. 7 min. East 83.82 feet to an iron pin; thence North 64 deg. 51 min. East 120.78 feet to an iron pin; thence North 78 deg. 59 min. East 110.88 feet to a concrete monument at U.S. Government corner No. 9; thence North 36 deg. 4 min. East 142.56 feet to an iron pin; thence North 30 deg. 53 min. East 130.02 feet to an iron pin; thence North 37 deg. 54 min. East 250.14 feet to an iron pin; thence North 64 deg. 20 min. East 99 feet to an iron pin; thence North 48 deg. 38 min. East 116.16 feet to a concrete monument at U.S. Government corner No. 8;

thence leaving Old Millrock Road, South 67 deg. 21 min. East 69.71 feet to an iron pin; thence South 38 deg. 19 min. East 156.49 feet to an iron pin; then South 18 deg. 6 min. East 72.22 feet to an iron pin; thence South 15 deg. 43 min. East 129.80 feet to an iron pin; thence South 47 deg. 52 min. East 116.60 feet to an iron pin; thence South 55 deg. 59 min. East 286.02 feet to an iron pin; thence South 34 deg. 22 min. East 152.60 feet to an iron pin; thence South 25 deg. 30 min. East 115.83 feet to an iron pin; thence South 39 deg. 21 min. East 133.37 feet to an iron pin; thence South 33 deg. 19 min. East 158.27 feet to an iron pin; thence South 4 deg. 53 min. East 147.22 feet to an iron pin; thence South 3 deg. 20 min. East 124.87 feet to an iron pin; thence South 7 deg. 21 min. East 145.15 feet to an iron pin; thence South 16 deg. 43 min. West 52.73 to an iron pin at a pine; thence South 48 deg. 9 min. West 707.35 feet to a concrete monument at a stone in a mound of stones, a corner of Sawyer and Mongovis; thence with Sawyer's line, South 45 deg. 52 min. West 1432.16 feet to a concrete monument at a fence post; thence South 1 deg. 4 min. East 752.37 feet to a concrete monument at an old pine corner; thence North 63 deg. 52 min. West 185.72 feet to an iron pin; thence South 83 deg. 27 min. West 97.87 feet to an iron pin; thence South 50 deg. 59 min. West 176.92 feet to an iron pin; thence South 48 deg. 40 min. West 248.62 feet to an iron pin; thence South 46 deg. 54 min. West 118.98 feet to an iron pin; thence South 19 deg. 52 min. West 179.52 feet to a concrete monument at a locust stake in a group of chestnut stumps; thence South 5 deg. 34 min. East 254.38 feet to an iron pin; thence South 0 deg. 48 min. East 159.29 feet to an iron pin; thence South 6 deg. 40 min. West 166.06 feet to an iron pin; thence South 18 deg. 21 min. East 260.79 feet to an iron pin at a pine; thence South 9 deg. 36 min. West 69.55 feet to an iron pin; thence South 12 deg. 31 min. West 112.07 feet to an iron pin; thence South 29 deg. 23 min. West 165.63 feet to an iron pin; thence South 69 deg. 56 min. West 78.04 feet to an iron pin; thence South 55 deg. 13 min. West 79.15 feet to an iron pin; thence South 19 deg. 35 min. West 196.03 feet to an iron pin at a pine, a corner of Sawyer and Wanner; thence with the lines of Wanner and others, South 87 deg. 14 min. West 389.10 feet to an iron pin in the center line of Griffith Road; thence with the Center line of Griffith Road, South 0 deg. 17 min. East 99.14 feet to an iron pin; thence South 8 deg. 15 min. East 154.60 feet to an iron pin; thence leaving Griffith Road, South 54 deg. 47 min. East 63.30 feet to a concrete monument; thence South 64 deg. 40 min. East 95.70 feet to an iron pin; thence South 39 deg. 13 min. East 123 feet to an iron pin; thence South 21 deg. 36 min. East 113.90 feet to a concrete monument; thence South 47 deg. 9 min. West 145.20 feet to an iron pin; thence South 32 deg. 3 min. West 72.05 feet to an iron pin; thence South 19 deg. 41 min. West 82.70 feet to an iron pin; thence South 12 deg. 25 min. East 42.90 feet to an iron pin; thence South 80 deg. East 30 feet to an iron pin at three Spanish oaks; thence North 82 deg. 42 min. East 272.9 feet to an iron pin; thence North 58 deg. 35 min. East 77 feet to an iron pin; thence South 62 deg. 29 min. East 12 feet to the center of Bee Tree Creek; thence with the meanderings of Bee Tree Creek, the following nine (9) courses and distances:

South 31 deg. 52 min. West 185.99 feet to a point; thence South 13 deg. 28 min. West 120.87 feet to a point; thence South 0 deg. 55 min. West 72.80 feet to a point; thence South 35 deg. 24 min. West 54.37 feet to a point; thence South 29 deg. 28 min. West 93.37 feet to a point; thence South 28 deg. 46 min. West 90 feet to a point; thence South 37 deg. 4 min. West 54.30 feet to a point; thence South 28 deg. 20 min. West 72 feet to a point; thence South 48 deg. 52 min. West 60.57 feet to a point;

thence leaving Bee Tree Creek, South 66 deg. 42 min. East 308.15 feet to a concrete monument; thence South 29 deg. 25 min. West 204.17 feet to a concrete monument; thence South 35 deg. 55 min. East 192.72 feet to a point in

the center line of the present (New) Bee Tree Road; thence with the center line of the present (New) Bee Tree Road, the following six (6) courses and distances:

South 30 deg. 22 min. West 145 feet to a point; thence South 30 deg. 22 min. West 38.16 feet to a point; thence South 30 deg. 57 min. West 100.12 feet to a point; thence South 31 deg. 52 min. West 100.25 feet to a point; thence South 33 deg. 55 min. West 74.64 feet to a point at the Southernmost corner of that property conveyed by Bertha Severson, Widow, to Oerlikon Tool and Arms Corporation of America, by deed recorded in Deed Book 715 at Page 620, in the Office of the Register of Deeds of Buncombe County, North Carolina, and also being the beginning point of that property conveyed the Grantor herein to N. Max Clubb, by deed recorded in Deed Book 1199 at Page 733, in the Office of the Register of Deeds of Buncombe County, North Carolina; thence with the Western line of N. Max Clubb and with the center line of the present (New) Bee Tree Road, in a Southwest direction to a point in the center line of the present (New) Bee Tree Road at the Northernmost corner on the center line of the present (New) Bee Tree Road of that property now or formerly owned by J. E. Webb;

thence leaving the center line of the present (New) Bee Tree, North 78 deg. 43 min. West 70.74 feet, more or less, to a point in Bee Tree Creek; thence with the meanderings of Bee Tree Creek, the following nine (9) courses and distances:

South 14 deg. 10 min. West 188.50 feet to a point; thence South 6 deg. 35 min. West 75.50 feet to a point; thence South 18 deg. 30 min. West 104.50 feet to a point; thence South 25 deg. West 93 feet to a point; thence South 35 deg. West 103 feet to a point; thence South 26 deg. West 102.50 feet to a point; thence South 27 deg. 30 min. East 120 feet to a point; thence South 33 deg. 45 min. West 114 feet to a point; thence South 31 deg. 1 min. West 60.72 feet to a point at the Northeast corner of that property conveyed by the Grantor herein to George W. Beverly, Jr., and W. Neal Hanks, by deed recorded in Deed Book 1201 at Page 501, in the Office of the Register of Deeds of Buncombe County, North Carolina;

thence leaving Bee Tree Creek and running with the Northern line of the aforesaid property conveyed to Beverly and Hanks, North 83 deg. 54 min. 14 sec. West 367.33 feet to a stake; thence running with the Northern line of the aforesaid property conveyed to Beverly and Hanks, North 87 deg. 9 min. 14 sec. West 329.57 feet to a stake at the Northwest corner of the aforesaid property conveyed to Beverly and Hanks; thence running with the Western line of the aforesaid property conveyed to Beverly and Hanks, the following five (5) courses and distances:

South 8 deg. 39 min. 53 sec. West 584.03 feet to a stake; thence South 10 deg. 5 min. 56 sec. West 546.94 feet to a stake; thence North 79 deg. 51 min. 2 sec. West 25.54 feet to a stake; thence South 10 deg. 8 min. 40 sec. West 174.60 feet to a stake; thence North 79 deg. 51 min. 19 sec. West 29.28 feet to a point in the center line of Old Bee Tree Road, the place and point of BEGINNING.

APPENDIX B

SCOPE OF WORK ADDITIONAL REMEDIAL INVESTIGATION/FEASIBILITY WORK AND ASSOCIATED BASELINE RISK ASSESSMENT

**CHEMTRONICS SUPERFUND SITE
SCOPE OF WORK
ADDITIONAL REMEDIAL INVESTIGATION/
FEASIBILITY STUDY WORK
AND ASSOCIATED BASELINE RISK ASSESSMENT**

Swannanoa, Buncombe County, North Carolina

INTRODUCTION

The purpose of the Remedial Investigation and Feasibility Study (RI/FS) described herein is to investigate the nature and extent of contamination at the Chemtronics Superfund Site ("the Site"), assess the current and potential risk to public health, welfare and the environment, and to develop and evaluate potential Remedial Action Alternatives.

The Site encompasses approximately 1,027 acres. A previous RI/FS completed at the Site in the late 1980s focused on 23 individual waste disposal areas which were grouped into six discrete disposal areas (DAs) for remedial action. The six DAs encompass a total of approximately 10 acres. As documented in a Record of Decision (ROD) issued in 1988 and modified in 1989, the U.S. Environmental Protection Agency (EPA) specified remedial actions for soil and groundwater associated with the six DAs. Specifically, the ROD called for capping of DAs, installation and operation of two groundwater pump and treat systems to address contaminant plumes associated with the DAs, and compliance monitoring and reporting. The remedy specified in the 1988 ROD, and 1989 ROD Amendment was implemented in 1992 and has been in operation since that time. Two Five Year Review reports have been completed; the most recent in September 2007. The September 2007 report identified specific action items that are necessary to improve the understanding of site conditions and/or assess the effectiveness of the on-going remedial actions. The action items identified in the September 2007 Second Five Year Report shall be incorporated into the Scope of Work described herein.

In 1997, the property owner entered into an agreement with the State of North Carolina to assess environmental impacts associated with site activities regulated under the Resource Conservation and Recovery Act (RCRA) program. Between 1997 and 2007, the Respondents conducted extensive investigations of environmental conditions across the Site and identified groundwater and surface water impacts beyond those that were being addressed by the on-going remedial actions specified by the 1989 ROD. These Site investigation activities have been documented in a series of reports submitted to EPA and the State of North Carolina Department of the Environment and Natural Resources (DENR) (see **Attachment A**).

In January 2003, the Respondents prepared a document entitled Chemtronics Site - Holistic Site Management Plan (HSMP) which described an outside-in approach to Site assessment and remediation. Furthermore, the HSMP specified that the Site assessment and remediation activities should be regulated by a regulatory agency under a single regulatory program. EPA and DENR have acknowledged the approach

described in the HSMP. In correspondence to EPA, dated March 9, 2007, DENR-RCRA agreed to relinquish all further oversight regulatory authority for the Site to the EPA CERCLA program.

The RI/FS Scope of Work described herein will incorporate all Site data previously collected under both the CERCLA and RCRA programs and will follow the approach described in the HSMP. The holistic approach will involve assessment of existing Site conditions and development of remedial strategies based on a Conceptual Site Model (CSM) of hydrogeologic conditions at the Site and current and reasonably expected future land use and groundwater use at the Site. Remedial action decisions will be based on potential risk to potential receptors associated with all media.

The RI and FS described herein are interactive and shall be conducted concurrently so that the data collected in the RI is focused on missing elements of the CSM and influences the development of Remedial Action Alternatives in the FS, which in turn affects the data needs. Work shall be performed taking into account prior CERCLA/RCRA work at the Site as set forth herein.

The Respondents shall conduct the RI/FS and the Baseline Risk Assessment (BRA) component and produce an RI/FS Report that is in accordance with this Scope of Work (SOW), the Guidance for Conducting Remedial Investigations and Feasibility Studies Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund"), (Interim Final) (U.S. EPA Office of Emergency and Remedial Response, October 1988) (the "RI/FS Guidance"), the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (March 8, 1990) and other guidance used by EPA in conducting an RI/FS (the primary guidance documents are listed in Attachment B), as well as any additional requirements in the Administrative Order on Consent U.S. EPA Region 4, CERCLA Docket No. _____, dated as of _____ 2008 (Settlement Agreement or AOC). The RI/FS Guidance describes the report format and the required report content. Pertinent RI/FS Guidance section numbers are denoted in parentheses throughout this SOW. The Respondents shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI/FS, except as otherwise specified in the AOC.

After the completion of the RI/FS, EPA shall select a remedy that comprehensively addresses the entire Site. EPA will document its remedy selection in an amended Record of Decision (ROD). The Remedial Action Alternative selected by EPA will meet the cleanup standards specified in §121 of the Superfund Amendments and Reauthorization Act of 1986 (SARA). That is, the selected remedial action will be protective of human health and the environment, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws or regulations (ARARs), and will address the statutory preference for on-site treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element. The Final RI/FS Report(s), as adopted by EPA, and the BRA together with the remainder of the

Administrative Record, will form the basis for the selection of the remedy to be implemented for the Site and will provide the information necessary to support the development of the requisite ROD action.

As specified in §104(a)(1) of CERCLA, as amended by SARA, EPA must provide oversight of the Respondents' activities throughout the RI/FS. The Respondents shall support EPA's initiation and conduct of activities related to the implementation of oversight activities. However, the primary responsibility for conducting an adequate RI/FS to enable and support the selection of a Site-wide remedy shall lie with the Respondents. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA approval of a task or deliverable shall not be a guarantee as to the ultimate adequacy of such task or deliverable. A summary of the major deliverables that the Respondents shall submit for the RI/FS is attached (Attachment C). In addition, the schedule of RI/FS activities is also attached (Attachment D). Any dates or deadlines specified herein may be revised upon written approval by EPA. The schedule specified in Attachment D to this document is enforceable under the terms of the AOC. EPA shall endeavor to approve any deliverable in a timely manner.

TASK 1 - SCOPING (RI/FS Guidance, Chapter 2)

Scoping is the initial planning process of the RI/FS and has been initiated by EPA to determine the site-specific objectives of the RI/FS prior to negotiations between the Respondents and EPA. Scoping is continued, repeated as necessary, and refined throughout the RI/FS process. In addition, to developing the site objectives of the RI/FS, EPA has developed a Site Management Strategy. Consistent with the Site Management Strategy outlined below, the specific project scope shall be planned by the Respondents and EPA. The Respondents shall document the site-specific project objectives (the Site Objectives) and initial scope of work in a Work Plan. Because the work required to perform an RI/FS is not fully known at the outset and is phased in accordance with a site's complexity and the amount of available information, it may be necessary to prepare supplemental Work Plans during the RI/FS to satisfy the Site objectives. Modifications to the Work Plan may be developed as deemed appropriate by EPA and the Respondents.

EPA has determined the preliminary Site Objectives, based on available information, to be the following:

1. Review of existing information pertaining to the Site. This review includes Work Plans and the associated data generated by EPA's Preliminary Assessment/Site Inspection Report, previous CERCLA and the RCRA related reports for the Site, Site-wide sampling data, EPA's Environmental Photographic Interpretation Center photos, the Preliminary Natural Resources Survey, other reports from local, State and Federal agencies, court records, information from local businesses such as local well drillers and waste haulers and generators, facility records, and information from facility owners and employees and nearby citizens.

2. Review of relevant guidance (see attached references) to understand the remedial process. This information shall be used in performing the RI/FS and preparing all deliverables under this SOW.
3. Identification of all Federal and State ARARs.
4. Preparation of an initial CSM in accordance with applicable EPA guidance.
5. The RI/FS Work Plan shall guide the RI/FS and BRA and development of the remedial strategy by providing a comprehensive overview of sources of identified contamination, known or potential pathways of migration of contaminants, and potential exposure of receptors to such contamination under current and reasonably expected future land use and groundwater use at and around the Site. The CSM will be integrated into the RI/FS Work Plan. The CSM will take into account the geologic/hydrogeologic conditions at the Site, and the sources, types and distribution of contaminants and any breakdown products, the identification of potential contaminant pathways and receptors, and potential human health and ecological risks associated with such contaminants at the Site.
6. Determination of the nature and lateral and vertical extent of contamination (waste types, concentrations and distributions) for all affected media including air, groundwater, soil, surface water, sediment, and biota, etc., sufficient to support the BRA and FS for Site-wide remedy selection.
7. Supplementation of previous area well surveys as warranted by the results of the site characterization, including determining water uses, well construction methods used, the number and age of users, and the volume and rate of water usage.
8. Preparation of the BRA, which shall consist of a Human Health Assessment and an Ecological Risk Assessment.
9. Identification and screening of potential treatment technologies along with containment/disposal requirements for residuals or untreated wastes.
10. Assembly of technologies into Remedial Action Alternatives and screening of the alternatives.
11. Performance of bench or pilot Treatability Studies as necessary.
12. Detailed Analysis of Remedial Action Alternatives.
13. Sample collection/data analysis of the information necessary to conduct an Ecological Risk Assessment if appropriate. These tasks are outlined in "Ecological Risk Assessment Guidance for Superfund Process for Designing and Conducting Ecological Risk Assessments."

14. Performance of a cultural resources survey to determine if the Site has any archaeological or historic value may be necessary. The need for conducting a cultural resources survey must be evaluated during the project planning stage of the RI/FS, and if determined by EPA to be necessary, the strategy for developing the cultural resources survey must be included in the Remedial Investigation Work Plan.

The Site Management Strategy includes the following:

1. Use of a holistic, comprehensive approach in conjunction with an appropriate CSM to guide the RI/FS.
2. A comprehensive, holistic investigation of the Site including the characterization of any and all off-site contamination which may have been caused by contaminants originating from the Site.
3. An iterative Work Plan that incorporates an up to date CSM and identifies data gaps utilizing data gained from evaluation of the Site.
4. EPA oversight of the Respondents' conduct of the work to ensure compliance with applicable laws, regulations, and guidance and to ensure that the work proceeds in a timely fashion.
5. EPA management of the remedy selection and ROD phase with input from the State Agencies, Natural Resources Trustee, and the public (including the Respondents).

a. Site Background (2.2)

The Respondents shall gather and analyze the existing background information regarding the Site.

Collect and Analyze Existing Data and Document the Need for Additional Data (2.2.2; 2.2.6; 2.2.7)

Before planning RI/FS activities, all existing site data shall be thoroughly compiled and reviewed by the Respondents. Specifically, this compilation and review shall include currently available data relating to the varieties and quantities of hazardous substances at the Site and past disposal practices (what type of contaminants were disposed where, when, and by whom). This compilation and review shall also include results from any previous sampling or other investigations that may have been conducted. This information shall be utilized in determining additional data needed for Site Characterization, better defining potential ARARs, and developing a range of preliminarily identified Remedial Action Alternatives. Data Quality Objectives (DQOs) shall be included within the RI/FS Work Plan and subject to approval by EPA. DQOs will define how the data are intended to be used in the RI/FS, BRA, and development of remedial action objectives. The usefulness of existing data shall be evaluated according to the DQOs as approved by EPA. All

work conducted pursuant to the Unilateral Administrative Order, *in the matter of Chemtronics, Inc., Hoechst-Celanese Corporation, and Northrop Corporation*, issued by EPA, dated March 22, 1989, and the Administrative Order on Consent, Docket No. 97-SF-206, between the State of North Carolina, Department of Environment, Health and Natural Resources (now the Department of Environment and Natural Resources) and Chemtronics, Inc., effective September 4, 1997, will be recognized as appropriate in considering the scope of RI/FS activities.

b. Project Planning (2.2)

The Respondents shall utilize existing data to prepare the CSM. A specific project scope will then be developed to address any identified data gaps. Project planning activities include those tasks described below as well as the development of specific required deliverables as described in paragraph c. The Respondents shall meet or discuss via conference call with EPA regarding the following activities before the drafting of the scoping deliverables.

Refine the Site Objectives and Develop Preliminary Remedial Action Objectives and Alternatives (2.2.3)

Once existing information about the Site has been analyzed, a CSM prepared, and a conceptual understanding of the potential risks posed by the Site has been obtained, the Respondents shall review and, if necessary, refine the Site Objectives and develop preliminary Remedial Action Objectives (RAOs) for each actually or potentially contaminated medium. Any revised Site Objectives shall be documented in a technical memorandum and are subject to EPA approval prior to development of the other scoping deliverables. The Respondents shall then identify a preliminary range of broadly defined potential Remedial Action Alternatives and associated technologies. This range of options shall include, at a minimum, alternatives in which treatment is used to reduce the toxicity, mobility, or volume of contamination, alternatives that involve containment with little or no treatment, and a no-action alternative.

Document the Need for Treatability Studies (2.2.4)

If remedial actions involving treatment have been identified by the Respondents or EPA, Treatability Studies may be required, unless the Respondents can demonstrate to EPA's satisfaction that they are not needed. Where Treatability Studies are needed, preliminary identification of possible technologies and screening shall be done and the results submitted with the RI/FS Work Plan. Initial Treatability Study activities (such as research and study design) shall be planned to occur concurrently with Site Characterization activities (See Task 3). Pilot projects shall be integrated as necessary with ongoing Site-wide remedial activities.

Begin Preliminary Identification of Potential ARARs (2.2.5)

The Respondents shall conduct a preliminary identification of potential State and Federal ARARs (chemical-specific, location-specific, and action-specific) to assist in the refinement of remedial action objectives and the initial identification of Remedial Action Alternatives and ARARs associated with particular actions. ARAR identification shall continue as conditions and contaminants at the Site and Remedial Action Alternatives are better defined.

c. Scoping Deliverables (2.3)

The Respondents shall submit an RI/FS Work Plan, including the CSM, a Sampling and Analysis Plan (SAP), and a Health and Safety Plan (HASP) in accordance with the schedule outlined in Attachment D. The RI/FS Work Plan and SAP must be reviewed and approved and the HASP reviewed by EPA prior to the initiation of field activities.

RI/FS Work Plan (2.3.1)

A Work Plan which includes the CSM and documenting the decisions and evaluations completed during the scoping process shall be submitted to EPA for review and approval. The Work Plan shall be developed in conjunction with the SAP and the HASP, although each plan may be delivered under separate cover. The initial Work Plan and any subsequent addendums shall describe the data gaps that will be addressed and include a comprehensive description of the work to be performed, the media to be investigated (i.e., Air, Ground Water, Surface Water, Surface and Subsurface Soils, and Sediments, etc.), the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity and submission of each deliverable shall also be included. This schedule shall be consistent with Attachment D.

Specifically, the initial Work Plan shall present the following:

- A statement of the problem(s) and potential problem(s) posed by the Site and the objectives of the RI/FS.
- A background summary setting forth the following:
 - a description of the Site including the geographic location, and, to the extent possible, a description of the physiography, hydrology, geology, demographics, and the ecological, cultural, and natural resource features of the Site;
 - a synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties at the Site;

a listing of known or suspected existing sources, or areas exhibiting contaminant concentrations, that are to be investigated or otherwise addressed as part of the Site Characterization. In developing this listing, the Respondents shall review, consider, and include, as appropriate, all previously identified Solid Waste Management Units and Areas of Concern at the Site, and shall take into account actions previously undertaken to characterize and/or close such Solid Waste Management Units and Areas of Concern; and

a summary of the existing data in terms of physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the Site.

- A description of the Site Management Strategy developed by EPA during scoping as discussed previously in this SOW and as may be modified with EPA's approval.
- Presentation of the CSM and identification of data gaps.
- An Ecological Risk Assessment Work Plan.
- A preliminary identification of Remedial Action Alternatives together with any additional data or potential Treatability Studies required for the evaluation of Remedial Action Alternatives.
- A process for identifying Federal and State ARARs (chemical-specific, location-specific, and action-specific).
- A preliminary identification of RAOs.
- A detailed description of the tasks to be performed, information needed for each, and a description of the work products that shall be submitted to EPA. This description must also include the deliverables set forth in the remainder of this SOW.
- A schedule for each of the required activities which is consistent with Attachment D and the RI/FS Guidance; and
- A project management plan, including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, data format, and backup data management); monthly reports to EPA; and meetings and presentations to EPA at the conclusion of each major phase of the RI/FS.

The Respondents shall refer to Appendix B of the RI/FS Guidance for a comprehensive description of the contents of the required Work Plan.

Because of the iterative nature of the RI/FS, additional data requirements may be identified throughout the RI/FS process. The Respondents shall submit a technical memorandum documenting any need for additional data, including an updated CSM as appropriate, along with the proposed DQOs whenever such requirements are identified. In any event, the Respondents are responsible for fulfilling additional data and analysis needs identified by EPA consistent with the general scope and objectives of this SOW and the AOC.

Sampling and Analysis Plan (2.3.2)

The Respondents shall prepare a SAP to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs approved by EPA. The SAP provides a mechanism for planning field activities and consists of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The QAPP will be prepared in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001) and "EPA Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-98/018, February 1998). The DQOs will, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the proposed National Contingency Plan, pages 51425, 51426 and 51433 (December 21, 1988). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures and data reduction, validation, and reporting. These procedures must be consistent with the Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (November 2001) or subsequent guidance. Field personnel shall be available for EPA QA/QC training and orientation, as required.

The Respondents shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This demonstration must include use of methods and analytical protocols for the chemicals of concern (typically the Target Compound List (TCL) and the Target Analyte List (TAL)) in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved by EPA in the QAPP for the Site. The laboratory must have and follow an EPA-approved QA program. If a laboratory not currently participating in the Contract Laboratory Program (CLP) is selected, methods consistent with CLP methods that would be used at the Site for the purposes proposed and QA/QC procedures approved by EPA shall be used. The Respondents shall only use laboratories which have a documented Quality

Assurance Program which complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Management Plans (QA/R-2)" (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA. If the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval. EPA may require that the Respondents submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications. The Respondents shall provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation and analysis.

Health and Safety Plan (2.3.3)

A HASP shall be prepared in conformance with the Respondents' health and safety program, and in compliance with Occupational Safety and Health Administration (OSHA) regulations and protocols. The HASP shall include the eleven elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. It should be noted that EPA does not "approve" the Respondents' HASP, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

TASK 2 - COMMUNITY RELATIONS (2.3.4)

The development and implementation of community relations activities are the responsibility of EPA. The critical community relations planning steps performed by EPA include conducting community interviews and developing a community relations plan. Although implementation of the community relations plan is the responsibility of EPA, the Respondents may be requested to assist by providing information regarding the history of the Site and participating in public meetings. The extent of the Respondents' involvement in community relations activities is left to the discretion of EPA. The Respondents' community relations responsibilities, if any, shall be specified in the community relations plan. All RI/FS community relations activities conducted by the Respondents shall be subject to oversight by EPA.

TASK 3 - SITE CHARACTERIZATION (RI/FS Guidance, Chapter 3)

As part of the RI, the Respondents shall perform the activities described in this task, including the preparation of a Site Characterization Summary and an RI Report. The overall objective of Site Characterization is to describe areas of the Site that may pose a threat to human health or the environment using existing data and/or collection of additional field data. This objective is accomplished by first developing a CSM to define the current understanding of Site conditions and identify data gaps; this shall be based on determining the physiography, geology and hydrology of the Site. Surface and subsurface pathways of migration shall also be defined. The Respondents shall address the Site as a whole, with an emphasis on evaluating groundwater conditions at

the Site boundary and working back toward potential source areas. The RI shall identify the sources of contamination and define the nature, and the horizontal and vertical extent of contamination, including its physical and chemical constituents in all media at the Site (taking into account any changes in the physical or chemical characteristics of the contaminants as they have migrated from the source areas), in sufficient detail to support the BRA and holistic Site remedial strategy. This investigation will be designed to address data gaps identified in the Work Plan by the CSM and provide for a comprehensive understanding of the nature and extent of contamination at the Site. Using this information, contaminant fate and transport shall be determined and projected.

During this phase of the RI/FS, the Work Plan, SAP, and HASP shall be implemented. If necessary, field data shall be collected and analyzed to provide the information required to accomplish the objectives of the study. The Respondents shall notify EPA at least two weeks in advance of all field work regarding the planned dates for field activities, including, if necessary to fill data gaps, installation of monitoring wells, installation and calibration of equipment, pumping tests, field lay out of any sampling grid, excavation, sampling and analysis activities, and other field investigation activities. The Respondents shall demonstrate that the laboratory and type of laboratory analyses that will be utilized during Site Characterization meets the specific QA/QC requirements and the DQOs as specified in the SAP. In view of the unknown conditions at the Site, activities are often iterative and, to satisfy the objectives of the RI/FS, it may be necessary for the Respondents to supplement the work specified in the initial Work Plan. In addition to the deliverables below, the Respondents shall provide a monthly progress report and participate in meetings with EPA at major points in the RI/FS.

a. Field Investigation (3.2)

The field investigation includes the gathering of data including items such as the physical characteristics, sources of contamination, and the nature and extent of contamination at the Site as necessary to fill data gaps identified in the Work Plan by the CSM. These activities shall be performed by the Respondents in accordance with the Work Plan and SAP. At a minimum, this investigation shall include the following activities:

Implementing and Documenting Field Support Activities (3.2.1)

The Respondents shall initiate field support activities following approval of the Work Plan and SAP. Field support activities may include obtaining access to the Site, property surveys, scheduling, and procuring equipment, office space, laboratory services, utility services and/or Contractors. The Respondents shall notify EPA at least two weeks prior to initiating any field support activities so that EPA may adequately schedule oversight tasks. The Respondents shall also notify EPA in writing or via email upon completion of field support activities.

Investigating and Defining Site Physical and Biological Characteristics (3.2.2)

The Respondents shall collect data on the physical and biological characteristics of the Site and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics identified in the Work Plan. This information shall be ascertained through a combination of assessment of existing data, physical measurements, observations, and sampling efforts and shall be utilized to define potential transport pathways and receptor populations. In defining the physical characteristics of the Site, the Respondents shall also obtain sufficient engineering data (such as pumping characteristics, soil particle size, permeability, etc.) for the projection of contaminant fate and transport and the development and screening of Remedial Action Alternatives, including information necessary to evaluate treatment technologies.

Defining Sources of Contamination (3.2.3)

The Respondents shall locate sources of contamination in sufficient detail as necessary to support the development of a Site-wide remedial strategy. Source area locations shall be identified based on, among other things: (i) information regarding historical operations which indicates the potential for a release or threatened release at the Site, (ii) sampling data and other information derived from prior Site investigation activities; and (iii) an outside-in analysis of Site-wide groundwater conditions. For each location, the lateral and vertical extent of contamination shall be characterized in sufficient detail to address data gaps identified in the Work Plan based on the CSM. This characterization should be accomplished by using existing data to the extent possible, and/or sampling in an organized fashion approved by EPA. The physical characteristics and chemical constituents and their concentrations shall be determined for all known and discovered sources of contamination. To the extent necessary to support development of a Site-wide remedial strategy, the Respondents shall conduct sampling to define the boundaries of the contaminant sources in accordance with the QAPP and DQOs. Sources of contamination shall be analyzed for the potential of contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and other characteristics determined to be important for evaluating holistic and comprehensive Site-wide remedial actions, including information necessary to evaluate treatment technologies.

Describing the Nature and Extent of Contamination (3.2.4)

The Respondents shall gather information (either existing or newly collected) to describe the nature and extent of Site-wide contamination as a final step during the field investigation. To describe the nature and extent of contamination, the Respondents shall utilize the information on Site physical characteristics and sources of contamination to develop a preliminary estimate of the contaminants that may have migrated. The Respondents shall then conduct additional investigation to fill data gaps identified based on the CSM and described in the Work Plan or SAP such that, by using analytical techniques sufficient to detect

and quantify the concentration of contaminants, the extent of migration of contaminants through the various media at the Site can be determined. In addition, the Respondents shall gather data for calculations of contaminant fate and transport. This process is continued until the lateral and vertical extent of contamination has been determined in accordance with the QAPP and DQOs. EPA shall use the information on the nature and extent of contamination to determine the level of risk presented by the Site. Respondents shall use this information to help to determine aspects of the appropriate Remedial Action Alternatives to be evaluated.

b. Data Analyses (3.4)

Evaluate Site Characteristics (3.4.1)

The Respondents shall analyze and evaluate the data to describe: (1) physical and biological characteristics of the Site that are relevant to contaminant migration and potential receptors; (2) contaminant source characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. The information on physical and biological site characteristics, source characteristics, and nature and extent of contamination shall be used in the analysis of contaminant fate and transport. The evaluation shall include the actual and potential magnitude of releases from the sources and the lateral and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use. The RI data shall be presented in a computer disk format utilizing Lotus 1-2-3 or other equivalent, commonly used computer software. Respondents shall identify and then collect as needed any data as necessary to fill data gaps that are present during preparation of the CSM or BRA (see, "Guidance for Data Usability in Risk Assessment" U.S. EPA, Office of Emergency and Remedial Response, October 1990, OSWER Directive No. 9285.7-05). Also, this evaluation shall provide any information relevant to characteristics of the Site necessary for evaluation of the need for remedial action in the BRA, the development and evaluation of Remedial Action Alternatives, and the refinement and identification of ARARs. Analyses of data collected for Site Characterization shall meet the DQOs developed as part of the RI/FS Work Plan.

c. Data Management Procedures (3.5)

The Respondents shall consistently document the quality and validity of field and laboratory data compiled during the RI. At a minimum, this documentation shall include the following activities:

Documenting Field Activities (3.5.1)

Information gathered during characterization of the Site shall be consistently documented and adequately recorded by the Respondents in well maintained field logs and laboratory reports. The method(s) of documentation must be specified in the Work Plan and/or the SAP. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies. Supporting documentation described as the "CLP Data Package" must be provided with the sample analysis for all samples split or duplicated with EPA.

Maintaining Sample Management and Tracking (3.5.2; 3.5.3)

The Respondents shall maintain field reports, sample shipment records, analytical results and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of the BRA and Remedial Action Alternatives. Analytical results developed under the Work Plan shall not be included in any characterization reports for the Site unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the Respondents shall establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation.

d. Remedial Investigation (RI) Report (3.7)

The Respondents shall prepare and submit a Draft RI Report to EPA for review and approval. This report shall summarize results of field activities to characterize the Site, sources of contamination, nature and extent of contamination, and the fate and transport of contaminants. Such report shall also take into account any prior investigative work performed at the Site. The Respondents shall refer to the RI/FS Guidance for an outline of the report format and contents. Following comment by EPA, the Respondents shall prepare a Final RI Report which satisfactorily addresses EPA's comments.

TASK 4 - TREATABILITY STUDIES (RI/FS Guidance, Chapter 5)

Treatability Studies shall be performed by the Respondents as necessary to assist in the detailed analysis of alternatives. If applicable, study results and operating conditions will later be used in the detailed design of the selected remedial technology. The following activities shall be performed by the Respondents.

a. Determination of Candidate Technologies and the Need for Treatability Studies (5.2; 5.4)

The Respondents shall identify in a technical memorandum, subject to EPA review and comment, candidate technologies for a Treatability Studies program during project planning (Task 1). The listing of candidate technologies shall cover the range of technologies required for alternatives analysis (Task 5a). The specific data requirements for the Treatability Studies program shall be determined and refined during Site Characterization and the development and screening of Remedial Action Alternatives (Tasks 3 and 4, respectively).

Conduct Literature Survey and Determine the Need for Treatability Studies (5.2)

The Respondents shall conduct a literature survey to gather information on performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. If practical candidate technologies have not been sufficiently demonstrated, or cannot be adequately evaluated for the Site on the basis of available information, Treatability Studies shall be conducted. EPA shall determine whether Treatability Studies will be required. Pilot projects may also be performed that can be integrated with existing remedial activities.

Evaluate Treatability Studies (5.4)

Where EPA has determined that Treatability Studies are required, the Respondents and EPA shall decide on the type of Treatability Studies to use (e.g., bench versus pilot). Because of the time required to design, fabricate, and install pilot scale equipment as well as to perform testing for various operating conditions, the decision to perform pilot testing shall be made as early in the process as possible to minimize potential delays of the FS. To assure that a Treatability Study program is completed on time, and with accurate results, the Respondents shall either submit a separate Treatability Study Work Plan or an amendment to the original RI/FS Work Plan for EPA review and approval.

b. Treatability Study Deliverables (5.5; 5.6; 5.8)

In addition to the memorandum identifying candidate technologies, the deliverables that are required when Treatability Studies are to be conducted include a Treatability Study Work Plan, a Treatability Study SAP, and a Final Treatability Study Evaluation Report. EPA may also require a Treatability Study HASP, where appropriate.

Treatability Study Work Plan (5.5)

The Respondents shall prepare a Treatability Study Work Plan or amendment to the original RI/FS Work Plan for EPA review and approval. This Plan shall describe the background of the Site, holistic remedial action objectives, remedial

technologies to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The DQOs for Treatability Studies shall be documented as well. If pilot-scale Treatability Studies are to be performed, the Treatability Study Work Plan shall describe pilot plant installation and start-up, pilot plant operation and maintenance procedures, and operating conditions to be tested. If testing is to be performed off-site, permitting requirements must be addressed.

Treatability Study Sampling and Analysis Plan (5.5)

If the original QAPP or FSAP is not adequate for defining the activities to be performed during the Treatability Studies, a separate Treatability Study SAP or amendment to the original RI/FS SAP shall be prepared by the Respondents for EPA review and approval. It shall be designed to monitor treatability study and/or pilot test performance. Task 1c of this SOW provides additional information on the requirements of the SAP.

Treatability Study Health and Safety Plan (5.5)

If the original RI/FS HASP is not adequate for defining the activities to be performed during the Treatability Studies, a separate or amended HASP shall be developed by the Respondents. Task 1c of this SOW provides additional information on the requirements of the HASP. EPA does not "approve" the Treatability Study HASP.

Treatability Study Evaluation Report (5.6)

Following completion of Treatability Studies, the Respondents shall analyze and interpret the testing results in a technical report to EPA. Depending on the sequence of activities, this report may be a part of the RI/FS Report or a separate deliverable. The report shall evaluate each technology's effectiveness in meeting Site-wide, holistic remedial action goals, implementability, cost, and actual results as compared with predicted results. The report shall also evaluate full-scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

TASK 5 - BASELINE RISK ASSESSMENT

The Respondents will provide a BRA to EPA for the Site, consisting of a Human Health Risk Assessment and an Ecological Risk Assessment.

The Respondents shall prepare a BRA which identifies and characterizes the toxicity and effects of the hazardous substances present at the Site, describes contaminant fate and transport, evaluates the potential for human exposure, and assesses the risk of potential impact or threats on human health under current and reasonably expected future land use and groundwater use at the Site. In addition, as a component of the

BRA, the Respondents shall prepare an Ecological Risk Assessment which assesses the risk of potential impacts or threats to the ecology (including both flora and fauna). The BRA will provide EPA a basis for determining whether or not remedial action is necessary, a justification for performing any remedial action that is determined to be necessary, and risk basis for clean up goals.

The Respondents shall develop the human health portion of the BRA in accordance with EPA risk assessment guidance documents that are appropriate to the Site, which include Interim Final Risk Assessment Guidance for Superfund (RAGS) - Volume I - Human Health Evaluation Manual (Part A) (December 1989), Development of Risk-Based Remediation Goals (Part B)(December 1991), Standardized Planning, Reporting, and Review of Superfund Risk Assessments (Part D) (December 1997), and RAGS Part E (2004). These documents describe and illustrate the process of gathering and assessing human health risk information in addition to developing remediation goals. Other resources that the Respondents should consult as necessary when performing the BRA include: Exposure Factors Handbook (EPA/600/P-95/002Fa, August 1997). Land Use in the CERCLA Remedy Selection Process, OSWER Directive No. 9355.7-04, May 25, 1995; Soil Screening Guidance; Technical Background Document, 9355.4-17A, EPA/1501 R-95/128, May 1996, Soil Screening Guidance; User's Guide, 9355.4-3, April 1996; The Integrated Risk Information System (IRIS); the Health Effects Assessment Summary Tables (HEAST); the Supplemental Guidance to RAGS Region 4 Bulletins-Human Risk Assessment (November 1995). For preparing the ecological risk assessment, the Respondents shall also utilize the Supplemental Guidance to RAGS; Region 4 Bulletins-Ecological Risk Assessment (November, 1995) and the Ecological Risk Assessment Guidance for Superfund Process for Design and Conducting the Ecological Risk Assessment (June 1997). EPA and Respondents may identify and consult other guidance for human health and ecological risk assessment as necessary.

EPA issued a Part D to the RAGS guidance in 1997 titled Interim Risk Assessment Guidance for Superfund: Volume 1 - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments) hereafter referred to as RAGS Part D. The substantive elements of this guidance document should be used in the development of the human health portion of the BRA, but the formatting elements (e.g., organization and format of tables) may be adjusted as appropriate to present the risk assessment results for this Site most clearly and efficiently. Even though the RAGS Part D guidance suggests that interim deliverables be provided before the draft BRA is delivered, this SOW does not require these interim deliverables. The information that would be contained in these deliverables should be provided in the draft BRA. To assist in the review of the draft BRA, minimal adjustments should be made to formatting elements.

A Draft BRA Report (for both Human Health and Ecological Risk) shall be submitted at the completion of Site Characterization and included in the Draft RI Report (see Task 3). Following comment by EPA, the Respondents shall prepare a Final BRA Report which shall be included in the Final RI Report.

1. Human Health Risk Assessment

The Human Health Risk Assessment process consists of the four components listed below. During the scoping of the work assignment, the Respondents shall discuss with EPA the format of the BRA Report as well as any additional references to be utilized during the Human Health Risk Assessment.

A. Data Collection and Evaluation:

The Respondents shall review the information that is available on the hazardous substances present at the Site and shall identify the chemicals of potential concern (COPCs). The process of identifying COPCs should follow the guidance provided in Region 4's guidance and RAGS Part D. The data shall be tabulated according to the guidance provided in RAGS Part D, or an alternate format that is more efficient and appropriate for this Site. This portion of the BRA shall include a discussion of the rationale for the identification of the COPCs.

B. Exposure Assessment and Documentation:

The Respondents shall identify actual and potential exposure points and pathways. Exposure assumptions must be supported with data and must be consistent with Agency policy. For each exposure point, the release source, the transport media (e.g., ground water, surface water, air, etc.) and the exposure route (oral, inhalation, dermal) must be clearly described in a Conceptual Site Model (RI/FS Guidance 2-2). Potential exposures at the Site under both current and reasonably expected future land use and groundwater use at the Site must be developed and presented, using reasonable maximum exposure (RME) scenarios. The Human Health Evaluation Manual, Part A and the supplemental guidance entitled Standard Default Exposure Factors (OSWER Directive 9285.6-03) should be consulted in development of exposure assumptions. EPA referenced default exposure assumptions or default assumptions from other approved sources should be used when site specific data are not available. The Respondents shall include, within the BRA, the exposure scenarios with a description of the assumptions made and the use of data and a figure showing the site conceptual model. If it is appropriate to use fate and transport models to estimate the exposure concentration at points spatially separate from monitoring points or media not sampled, these models shall be presented and discussed. Representative data must be utilized and the limitations and uncertainties associated with the models must be documented. The Exposure Assessment Section in the BRA shall contain exposure concentrations typically based on the 95 percent upper confidence limit on the arithmetic average. The exposure concentration shall be used with the exposure assumptions to determine chemical-specific intake levels for each exposure scenario.

C. Toxicity Assessment and Documentation:

The Respondents shall utilize the information in IRIS, PPRTVs, HEAST, and if needed, other similar data bases and other information sources as discussed in the Region 4 guidance, to provide a toxicity assessment of the COPCs. Consult RAGS Part D and Region 4's guidance for specific guidance on what information is needed. This assessment shall include the types of adverse health effects associated with chemical exposures (including potential carcinogenicity or the toxic effect observed in deriving the Reference Dose (R_fD)), the relationships between magnitude of exposures and adverse effects, and the related uncertainties of contaminant toxicity (e.g., the weight of evidence for a chemical's carcinogenicity or the degree of confidence in the R_fD). Chemical surrogate analyses may be used as deemed appropriate and necessary in the Work Plan.

D. Risk Characterization:

The Respondents shall integrate the information developed during the exposure and toxicity assessments, to characterize and quantify the risks to human health and the environment posed by the Site under current and reasonably expected future land use and groundwater use at the Site. The risk characterization must identify the uncertainties associated with contaminants, toxicities, and exposure assumptions and other guidance provided in the February 1995 Guidance for Risk Characterization from EPA's Science Policy Council. Consult RAGS Part D and Region 4's guidance for specific guidance on what information is needed.

The human health risk assessment should also include a "central tendency" analysis for the contaminants of potential concern (COPCs) that are identified where such an analysis would be useful for providing perspective on the RME (reasonable maximum exposure) risk estimates for the risk manager and compliance with Agency guidance. Any risk values other than those representing the RME (i.e., central tendency) should be placed in the uncertainty sub-section of the risk characterization section of the BRA. The Supplemental Guidance to RAGS: Region 4 Bulletins (November, 1995) should be consulted for further guidance on central tendency issues.

2. Ecological Risk Assessment

In addition to the human health component of the BRA, the risk to the environment (non-human receptors) from exposure to the site-related contaminants must be addressed. The ecological risk assessment is comprised of the following steps (Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Supplemental Guidance to RAGS; Region 4 Bulletins, Ecological Risk Assessment):

A. Preliminary Screening Evaluation:

The initial site data are screened against Region 4 Ecological Screening Values, or other screening numbers approved by Region 4's Office of Technical Services, to determine if the Site will continue in the Ecological Risk Assessment process. The results of the initial Screening Evaluations are presented in a technical memorandum for EPA approval.

B. Screening Evaluation and Preliminary Problem Formulation and Ecological Effects Evaluation:

If it is determined that the Site will proceed into the Ecological Risk Assessment process, the Preliminary Problem Formulation is developed and the potential Ecological Effects of the contaminants are determined. Data are still generally very limited at this stage of the investigation. Information which should be used in developing the Preliminary Problem Formulation and the preliminary Ecological Effects Evaluation includes the environmental setting (including definition of habitat types found on or near the Site and expected and observed receptor species including state and federal threatened or endangered species or species receiving legislative protection, historic and existing drainage pathways, etc.), contaminants known or suspected to exist at the Site, contaminant fate and transport, ecotoxicological characteristics of the contaminants, potential exposure pathways, and selection of the endpoints to screen for ecological risk.

C. Screening Exposure Estimate and Risk Calculation:

Conservative assumptions regarding the exposure of site-related contaminant concentrations to ecological endpoints should be used in this evaluation since it represents the initial development of the Site model to determine if further efforts will be necessary to determine risks to ecological receptors. The Estimated Environmental Concentration (EEC) is compared to No Observed Adverse Effects level (NOAEL) to compute a Hazard Quotient (HQ)(or Hazard Index (HI) if appropriate).

D. Problem Formulation:

The further refinement of the CSM and problem formulation is necessary if it is determined that additional information is required to reach a decision on the level of risk to ecological receptors associated with site-related contaminant concentrations. Specific topics to be addressed include refining ecological contaminants of potential concern, further characterizing ecological effects of contaminants, reviewing and refining contaminant fate or transport, complete exposure pathways, and ecosystems potentially at risk, selecting assessment endpoints (including the logic behind their selection), and developing a CSM with working hypotheses or questions that the site investigation will address.

E. Study Design and Data Quality Objectives:

The measurement endpoint is determined and the site investigation is designed to provide the "missing" data elements required to reach the decision concerning the need for remedial action, and if required, the definition of safe or protective contaminant levels. The problem formulation stage describes the critical or necessary data required to reach this decision. The Ecological Risk Assessment Work Plan and SAP (including data analysis methods and data quality objectives) shall be submitted as part of the RI/FS Work Plan (Section 2.3.1). A schedule for performing field activities should be included in the RI/FS Work Plan.

F. Risk Characterization:

The data on exposure and effects are integrated into a statement concerning site-related risk to ecological receptors to the assessment endpoints. A weight-of-evidence approach is used to interpret the implications of different studies or tests for the assessment endpoints. The risk characterization section of the Baseline Ecological Risk Assessment should include a qualitative and quantitative presentation of the risk results and associated uncertainties.

3. Remedial Goal Options:

The BRA shall include a section which outlines the remedial goal options (RGOs) for the chemicals and media of concern that are protective of human health, the ecology and groundwater. This section should include both ARARs and health-based cleanup goals. This section should contain a table with media cleanup levels for each chemical that contributes to a pathway that exceeds a 10^{-4} excess cancer risk, or a HI of 1, or a state or federal chemical-specific ARAR for each scenario evaluated in the BRA. Chemicals need not be included if their individual carcinogenic risk contribution to a pathway is less than 10^{-6} or their noncarcinogenic HQ is less than 0.1. The table should include the 10^{-4} , 10^{-5} , and 10^{-6} risk levels for each chemical, media and scenario (land use) and the HQ 0.1, 1 and 10 levels as well as any chemical-specific ARAR values (state and federal). The values should be developed by combining the exposure levels to each chemical by a receptor from all appropriate routes of exposure (i.e., inhalation, ingestion and dermal) within a pathway and rearranging the site-specific average-dose equations used in the BRA to solve for the concentration term. The resulting table should present one set of Remedial Goal Options (RGOs) for each media and each current and reasonably expected future land use at the Site (e.g., residential (child and adult) and industrial).

The purpose is to provide EPA's Remedial Project Manager (RPM) with the most relevant risk-related media level options on which to develop remediation aspects of the FS and Proposed Plan. RAGS Part B is not appropriate for the development of RGOs since site specific exposure information is available at this stage in the risk assessment process. These site-specific RGOs replace the generic Preliminary

Remediation Goals (PRGs) in providing the final risk-based guidance for remedial action. The results of the ecological risk assessment should be the identification of remediation goals for the ecological COCs that would be protective for the receptors. These remediation goal options should be presented for the relevant environmental media.

4. Report Preparation

The report shall be submitted in accordance with the schedule in Attachment D.

The BRA Report shall include a comprehensive description of the four components of the Human Health Risk Assessment, and shall follow the principles established in the risk assessment guidance documents. A discussion of sources of uncertainty, data gaps, incomplete toxicity information, and modeling characteristics must be included. The Respondents shall refer to page 9-4 of the Human Health Evaluation manual for an outline of the report format. The BRA Report shall include an Ecological Risk Assessment which evaluates the ecological risk posed by the Site contaminants of concern. The report shall be revised, as necessary, based on EPA's comments and submitted to EPA for approval.

TASK 6 - DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES (RI/FS Guidance, Chapter 4)

The development and screening of Remedial Action Alternatives is performed to select an appropriate range of waste management options to be evaluated. This range of options shall include, at a minimum, alternatives in which treatment is used to reduce the toxicity, mobility, or volume of the waste; alternatives that involve containment with little or no treatment; and a no-action alternative. The following activities shall be performed by the Respondents as a function of the development and screening of Remedial Action Alternatives.

a. Development and Screening of Remedial Action Alternatives (4.2)

The Respondents shall begin to develop and evaluate, concurrent with the RI Site Characterization task, a range of appropriate remedial options that, at a minimum, ensure protection of human health and the environment, comply with all ARARs.

Refine and Document Remedial Action Objectives (4.2.1)

The Respondents shall review and, if necessary, propose refinement to the Site Objectives and preliminary RAOs that were established during the Scoping phase (Task 1). Any revised RAOs shall be documented in a technical memorandum as discussed in Task 6.b. These objectives shall specify the contaminants and media of interest, exposure pathways and receptors, and an acceptable contaminant level or range of levels (at particular locations for each exposure route).

Develop General Response Actions (4.2.2)

The Respondents shall develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the RAOs.

Identify Areas and Volumes of Media (4.2.3)

The Respondents shall identify areas and volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the RAOs. The chemical and physical characterization of the Site and the BRA and remediation goals shall also be taken into account.

Identify, Screen, and Document Remedial Technologies (4.2.4; 4.2.5)

The Respondents shall identify and evaluate technologies applicable to each general response action to eliminate those that cannot be implemented at the Site. General response actions shall be refined to specify remedial technology types. Technology process options for each of the technology types shall be identified either concurrent with the identification of technology types or following the screening of the considered technology types. Process options shall be evaluated on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The reasons for eliminating alternatives must be specified.

Assemble and Document Alternatives (4.2.6)

The Respondents shall assemble selected representative technologies into alternatives for each affected medium or operable unit. Together, all of the alternatives shall represent a range of treatment and containment for addressing conditions at the Site. The reasons for eliminating alternatives during the preliminary screening process must be specified.

A discussion of Engineering Controls and Institutional Controls shall be included, as applicable, to support determinations that complete exposure pathways will not exist.

Refine Alternatives

The Respondents shall refine the Remedial Action Alternatives to identify contaminant volumes to be addressed by the proposed process and sizing of critical unit operations as necessary. Sufficient information shall be collected for an adequate comparison of alternatives. RAOs for each medium shall also be refined as necessary to incorporate any new risk assessment information presented in the EPA-approved BRA Report. Additionally, action-specific ARARs shall be updated as the Remedial Action Alternatives are refined.

Conduct and Document Screening Evaluation of Each Alternative (4.3)

The Respondents may perform a final screening process based on short and long term aspects of effectiveness, implementability, and relative cost. Note that the evaluation of effectiveness involves evaluating the long-term and short-term risks - among other factors - associated with a remedial alternative. Generally, this screening process is only necessary when there are many feasible alternatives available for detailed analysis. If necessary, the screening of alternatives shall be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis.

As appropriate, the screening shall preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives shall include options that use treatment technologies and permanent solutions to the maximum extent practicable. The Respondents shall prepare a technical memorandum summarizing the results and reasoning employed in screening, arraying alternatives that remain after screening, and identifying the action-specific ARARs for the alternatives that remain after screening.

b. Alternatives Development and Screening Deliverables (4.5)

In accordance with the schedule at Attachment D, the Respondents shall submit a Technical Memorandum on Development and Screening of Alternatives summarizing the work performed and the results of each task above, including a discussion of any proposed revisions to any Site Objectives or RAOs. The memorandum also shall include an alternatives array summary. This alternatives array shall be modified by the Respondents when conducting Task 7 if required by EPA's comments to assure identification of a complete and appropriate range of viable alternatives to be considered in the detailed analysis. This deliverable shall document the methods, rationale, and results of the alternatives screening process.

TASK 7 - DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES (RI/FS Guidance, Chapter 6)

The detailed analysis shall be conducted by the Respondents to provide EPA with the information needed to allow for the selection of a comprehensive remedy for the Site.

a. Detailed Analysis of Alternatives (6.2)

The Respondents shall conduct a detailed analysis of remaining alternatives, including Institutional Controls and Engineering Controls. This analysis shall consist of an assessment of each option against a set of nine NCP evaluation criteria and a comparative review of all options using the same nine evaluation criteria as a basis for comparison.

Apply Nine NCP Criteria and Document Analysis (6.2.1; 6.2.4)

The Respondents shall apply nine NCP evaluation criteria to the assembled Remedial Action Alternatives to ensure that the selected Remedial Action Alternative will be protective of human health and the environment; will be in compliance with, or include a waiver of, ARARs; will be cost-effective; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and will address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State acceptance; and (9) community acceptance. Criteria 8 and 9 are considered after the RI/FS Report has been released to the general public. For each alternative, the Respondents shall provide: (1) a description of the alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative; and (2) a discussion of the individual criterion assessment. Since the Respondents do not have direct input on criteria (8) State acceptance and (9) community acceptance, these two criteria will be addressed by EPA after completion of the Draft FS Report.

Alternatives Analysis for Institutional Controls

The Respondents shall perform an Alternatives Analysis for Institutional Controls as potential remedial actions. This analysis shall: (1) identify the objectives (i.e., what will be accomplished) for the Institutional Controls; (2) determine the specific types of Institutional Controls that can be used to meet the remedial action objectives; (3) investigate when the Institutional Controls need to be implemented and/or secured and how long they must be in place; (4) research, discuss and document any agreement with the proper entities (e.g., state, local government entities, local landowners, conservation organizations, Respondents) on exactly who will be responsible for securing, maintaining and enforcing the Institutional Controls. The Alternatives Analysis for Institutional Controls shall also evaluate the Institutional Controls identified in the Memorandum on Development and Screening of Alternatives against the nine evaluation criteria outlined in the NCP (40 C.F.R. 300.430(e)(9)(iii) for CERCLA cleanups, including, but not limited to costs to implement, monitor and/or enforce the Institutional Controls.

Compare Alternatives Against Each Other and Document the Comparison of Alternatives (6.2.5; 6.2.6)

The Respondents shall perform a comparative analysis among the Remedial Action Alternatives. That is, each alternative shall be compared against the others using the nine evaluation criteria as a basis of comparison. No alternatives shall be identified by Respondents as the preferred alternative in the

FS. Identification and selection of the preferred alternative is conducted by EPA, although the Respondents are free to independently (i.e., under separate cover and not in the FS document) identify their preferred alternatives and communicate the basis for their preference to EPA.

b. Detailed Analysis Deliverables (6.5)

In accordance with the schedule Attachment D, the Respondents shall submit a Draft FS Report summarizing the work performed and the results of each task above for EPA review and comment. This report, as ultimately adopted or amended by EPA, provides a basis for remedy selection by EPA and documents the development and analysis of Remedial Action Alternatives. The Respondents shall refer to the RI/FS Guidance for an outline of the report format and the required report content. The Respondents shall prepare a Final FS Report which satisfactorily addresses EPA's comments. Once EPA's comments have been addressed by the Respondents to EPA's satisfaction and EPA approval has been obtained or an amendment has been furnished by EPA, the Final FS Report may be bound with the Final RI Report.

ATTACHMENT A

LIST OF REPORTS OF PREVIOUS INVESTIGATIONS

Camp Dresser & McKee, Inc. *Final Interim Report, Chemtronics, Inc., Remedial Investigation/Feasibility Study.* Jan 18, 1985.

U.S. Environmental Protection Agency, Region IV. *Administrative Order on Consent, In the Matter of the Chemtronics Site.* October 21, 1985.

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Sirrinc Environmental Consultants. *Feasibility Study, Chemtronics Site, Swannanoa, North Carolina.* November 1987.

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Environmental Investigations. *Confirmatory Sampling Study, Chemtronics, Inc. Swannanoa, North Carolina.* April 1998.

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Fletcher Group Inc. of North Carolina. *Chemtronics CERCLA Site Monthly Status Reports.* June 1, 2000 – March 9, 2001.

Fletcher Group Inc. of North Carolina. *Chemtronics Site; Swannanoa, NC; Monthly MSD Discharge Reports.* June 1, 2000 – March 9, 2001.

Altamont Environmental, Inc. *Chemtronics CERCLA Site Monthly Status Reports.* April 6, 2001 – Current.

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Chemtronics, Inc. *Response to NCDENR Comments on Site Investigation Sampling Report.* October 18, 2001.

Altamont Environmental, Inc. *Chemtronics CERCLA Site, Swannanoa, North Carolina.* October 24, 2001.

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Altamont Environmental, Inc. *Chemtronics Site, Update on Holistic Site Investigation and Summary of Proposed Changes to Work Plan for Holistic Site Investigation – Fall 2002.* May 27, 2003.

Altamont Environmental, Inc. *Chemtronics, Inc. – Attachment A - Description of CERCLA Disposal Areas and Associated Remedial Actions and Attachment B – Status of Site Investigation and Updated Conceptual Site Model.* August 6, 2003.

Altamont Environmental, Inc. *Response to HWS Comments on the Phase II Site Investigation Report.* August 29, 2003.

Altamont Environmental, Inc. *Response to Chemtronics CERCLA Site Remediation System Performance Review.* October 31, 2003.

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Altamont Environmental, Inc. *Notification of Replacement of Back Valley Line.* Submitted to Jon Bornholm of EPA. [May-June 2004.]

Altamont Environmental, Inc. *Notification of Intent to Chlorinate the Discharge Water – Permit No. G-006-02.* Submitted to Mr. Monty D. Payne of Metropolitan Sewerage District of Buncombe County. August 16, 2004.

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Chemtronics, Inc. *Notification of Finding an Additional Solid Waste Management Unit - Building 111 Sump.* February 21, 2005.

Chemtronics, Inc. *Notification of Finding an Additional Solid Waste Management Unit - Building 155 Sump System.* May 18, 2005.

Chemtronics, Inc. *Work Plan for Assessment of Media Adjacent to Newly Found Solid Waste Management Unit.* June 14, 2005.

Altamont Environmental, Inc. *Abandonment and Replacement of Extraction Well EW-8.* July 15, 2005

Chemtronics, Inc. *Removal of Miscellaneous Debris and Removal and Sampling of Drums and Soil Found Near the Acid Pits.* August 2005.

Chemtronics, Inc. *Transmittal of Building 155 Sump Closure Evaluation, Chemtronics, Inc. 180 Bee Tree Creek Road.* January 6, 2006.

Altamont Environmental, Inc. *Response to Comments on Bedrock Investigation Workplan, Chemtronics, Inc.* March 24, 2006.

Altamont Environmental, Inc. *Confirmatory Soil Sampling – Building 111 Sump Area, Chemtronics, Inc.* April 5, 2006.

Altamont Environmental, Inc. *Data Summary Report – Chemtronics Site, Swannanoa, NC.* September 12, 2006.

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Altamont Environmental, Inc. *Site-Wide Groundwater and Surface Water Sampling Plan and Quality Assurance Project Plan– Chemtronics Site, Swannanoa, NC.* April, 2007.

U.S. Environmental Protection Agency Region IV. *Second Superfund Five-Year Review Report, Chemtronics Superfund Site, Swannanoa, Buncombe County, NC.* September 2007.

Altamont Environmental, Inc. *Site-Wide Groundwater and Surface Water Sampling Data Summary Report.* February 27, 2008.

ATTACHMENT B

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

1. The National Oil and Hazardous Substances Pollution Contingency Plan, March 8, 1990.
2. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final" U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.
3. "Interim Guidance on Potentially Responsible Party Participation in Remedial Investigation and Feasibility Studies" U.S. EPA, Office of Waste Programs Enforcement, Appendix A to OSWER Directive No. 9355.3-01.
4. "Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies, Volume I." U.S. EPA, Office of Waste Programs Enforcement, July 1, 1991, OSWER Directive No. 9835.-1(c).
5. "Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies, Volume II." U.S. EPA, Office of Waste Programs Enforcement, July 1, 1991, OSWER Directive No. 9835.-1(d).
6. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001 a, August 1987, OSWER Directive No. 9355.0-14.
7. "Guidance for the Data Quality Objectives Process (QA-G4)," (EPA/600/R-96/055, August 2000).
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9. "Guidance for the Preparation of Standard Operating Procedures (QA-G-6)," (EPA/240/B-01/004, March 2001).
10. "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001).
11. "Guidance for Quality Assurance Project Plans (QA/G-5)," (EPA 600/R-98/018, February 1998).
12. "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001).

13. "Users Guide to the EPA Contract Laboratory Program," U.S. EPA, Sample Management Office, January 1991, OSWER Directive No. 9240.0-01D.
14. "CERCLA Compliance with Other Laws Manual," Two Volumes. U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.
15. "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites." U.S. EPA, Office of Emergency and Remedial Response (Draft), OSWER Directive No. 9283.1-2.
16. "Draft Guidance on Preparing Superfund Decision Documents." U.S. EPA. Office of Emergency and Remedial Response, March 1988, OSWER Directive No. 9355.3-02
17. "Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part A," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002A, December 1989, OSWER Directive No. 9285.7-01a.
18. "Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part B," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002B, OSWER Directive No. 9285.7-01 b.
19. "Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part C," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002C, OSWER Directive No. 9285.7-01c.
20. "Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part D," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/R-97/033, December 1997, OSWER Directive No. 9285.7-01D-1.
21. "Ecological Risk Assessment Guidance for Superfund: Process for Designing & Conducting Ecological Risk Assessments," U.S. EPA, OSWER Directive, No. 9285.7-25, February 1997.
22. "Guidance for Data Usability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/G-90/008, October 1990, OSWER Directive No. 9285.7-05.
23. "Performance of Risk Assessments in Remedial Investigation/Feasibility Studies (RI/FSs) Conducted by Potentially Responsible Parties (PRPs)," August 28, 1990, OSWER Directive No. 9835.15.
24. "Supplemental Guidance on Performing Risk Assessments in Remedial Investigation/Feasibility Studies Conducted by Potentially Responsible Parties (PRPs)," July 2, 1991, OSWER Directive No. 9835.15 (a).

25. "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions." April 22, 1991, OSWER Directive No. 9355.0-30.
26. "Health and Safety Requirements of Employees Employed in Field Activities." U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.
27. OSHA Regulations in 29 CFR 1910.1 20 (Federal Register 45654, December 19, 1986).
28. "Interim Guidance on Administrative Records for Selection of CERCLA Response Actions," U.S. EPA, Office of Waste Programs Enforcement, March 1, 1989, OSWER Directive No. 9833.3A.
29. "Community Relations in Superfund: A Handbook." U.S. EPA, Office of Emergency and Remedial Response, January 1992, OSWER Directive No. 9230.0-3C.
30. "Community Relations During Enforcement Activities And Development of the Administrative Record." U.S. EPA, Office of Waste Programs Enforcement, November 1988, OSWER Directive No. 9836.0-IA.
31. "Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual", U.S. EPA Region IV, Environmental Services Division. February 1, 1991 (revised periodically) and subsequent guidance.
32. "USEPA Contract Laboratory Program Statement of Work for Organic Analysis", U.S. EPA, Office of Emergency and Remedial Response, February 1988.
33. "USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis". U.S. EPA, Office of Emergency and Remedial Response, July 1988.
34. "Guidance for Implementing Presumptive Remedies," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/R-97/029, October 1997.
35. "Guidance for Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites." U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-91/001, February 1991.
36. "Rules of Thumb for Superfund Remedy Selection." U. S. EPA, Office of Solid Waste and Emergency Response. OSWER 9355.0-69. August 1997.
37. "Guidelines for Ecological Risk Assessment" U.S. EPA, Risk Assessment Forum, EPA/630/R095/002F, 1988.

ATTACHMENT C

SUMMARY OF THE MAJOR DELIVERABLES FOR THE REMEDIAL INVESTIGATION, FEASIBILITY STUDY AND BASELINE RISK ASSESSMENT

<u>TASK DELIVERABLE</u>	<u>EPA's RESPONSE</u>
TASK 1 SCOPING	
RI/FS Work Plan	Review and Approve
Field Sampling and Analysis Plan	Review and Approve
Quality Assurance Project Plan	Review and Approve
Site Health and Safety Plan	Review and Comment
TASK 2 COMMUNITY RELATIONS	
TASK 3 SITE CHARACTERIZATION	
Remedial Investigation Draft Report	Review and Comment
Remedial Investigation Final	Review and Approve
TASK 4 TREATABILITY STUDIES	Review and Approve, As Required
TASK 5 BASELINE RISK ASSESSMENT	
Draft BRA	Review and Comment
Final BRA	Review and Approve
TASK 6 DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES	
Draft Feasibility Study Report	Review and Comment
TASK 7 DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES	
Draft Feasibility Study Report	Review and Comment
Final Feasibility Study Report	Review and Approve

Note: 3 paper copies (1 unbound) along with an electronic copy in Word/Excel or equivalent format with Figures in JPEG format to EPA and 1 paper copy and 1 electronic copy to North Carolina Department of Environment and Natural Resources (NCDENR) will be required for each deliverable.

ATTACHMENT D

GENERAL SCHEDULE FOR THE MAJOR REMEDIAL INVESTIGATION, FEASIBILITY STUDY AND BASELINE RISK ASSESSMENT

Major Achievements for the RI/FS are as follows:

<u>ACHIEVEMENT</u>	<u>TIME PATHWAY</u>
Effective Date of AOC	A
EPA Approves RI/FS Work Plan and Associated Documents	B
EPA Approves RI	C
EPA Approves FS Report	D

Days to Complete the following Milestones:

<u>MILESTONES</u>	<u>TIME PATHWAY</u>
Effective Date of AOC	A
Submit Draft RI/FS Work Plan along with SAP, FSAP, QAPP, and HSP	A + 150
Date of EPA's Review Comments	A(1)
Final RI/FS Work Plan Submitted	A(1) + 45
Receipt of EPA's RI/FS Work Plan Approval	B
Initiate Field Activities	B + 30
Complete First Phase of Field Activities in Accordance to the Schedule in the Approved RI/FS Work Plan and Receive All Related Laboratory Data	B(1)
Receipt of EPA's Supplemental Work Plan Approval (if necessary)	B(2)
Initiate Phase II of RI	B(2) + 30
Complete All Remaining Field Activities in Accordance to the Schedule in the Approved Supplemental Work Plan including Receipt of All Laboratory Data	B(3)
Submit the Draft RI Report (includes the Draft Baseline Risk Assessment which includes the Human Health & Ecological Risk Assessments)	B(3) + 180

Receipt of EPA's Comments on Draft RI Report	B(4)
Final RI Report Submittal	B(4) + 90
Receipt of EPA's RI Approval	C
Submit Technical Memorandum on Development and Screening of Alternatives	C + 60
Receipt of EPA's Technical Memorandum Approval	C(1)
Submit Draft FS and Treatability Study in Accordance to the Schedule in the Approved RI/FS Work Plan	
Receipt of EPA's Comments on Draft FS and Treatability Study	C(2)
Final FS and TS Submitted	C(2) + 90
Receipt of EPA's FS & TS Approval	D

Note: If any Treatability study work occurs, then the above schedule will need to be expanded to accommodate this effort. Dates for RI and FS reports are based on the assumption that no additional field work will be necessary. Schedule may be modified with EPA's approval, if additional field work is necessary. Other deliverables listed in Attachment C shall be incorporated into the schedule submitted as part of the RI/FS Work Plan.

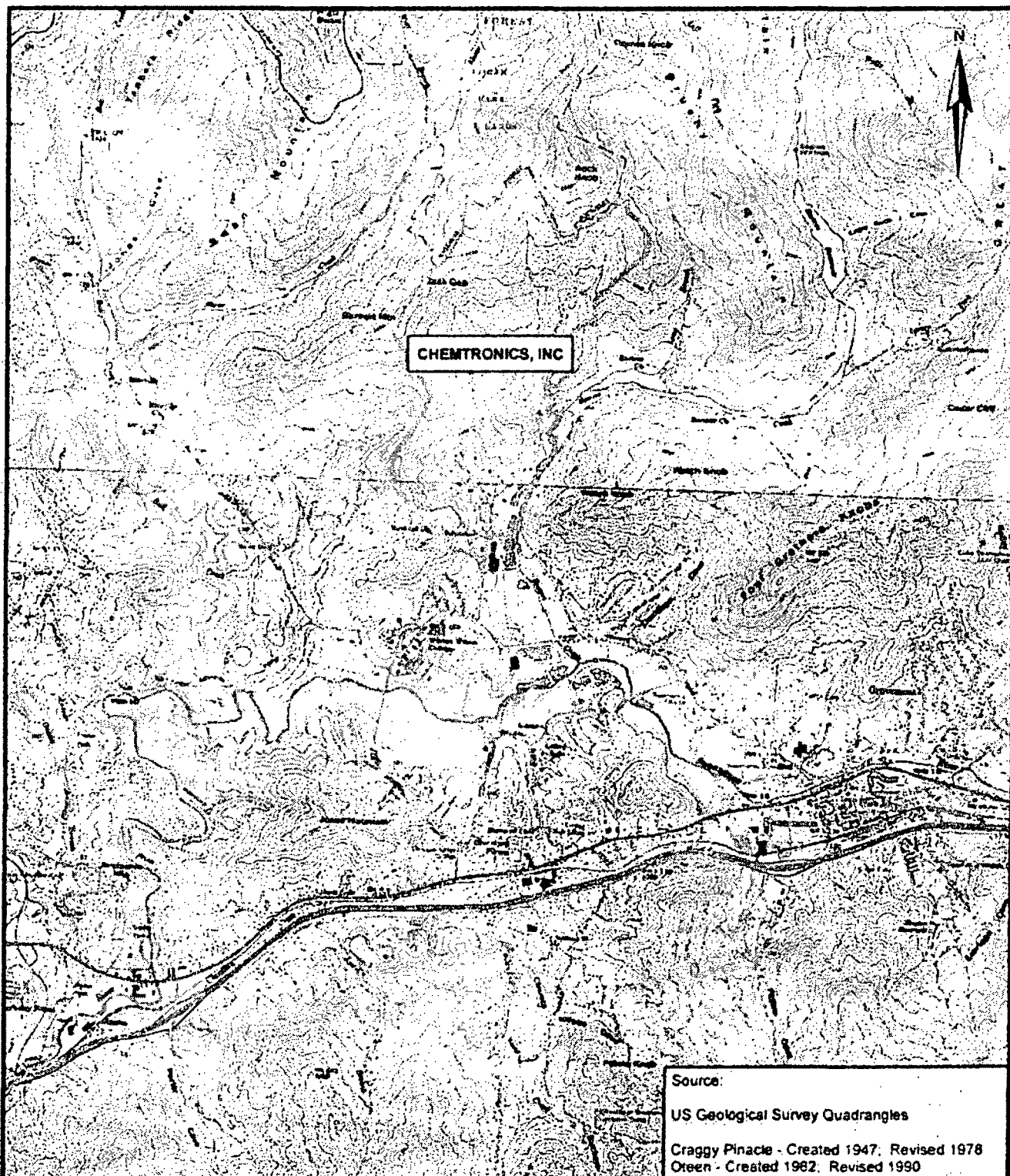
ATTACHMENT E

LIST OF ACRONYMS USED IN THIS SCOPE OF WORK

ARARs	Applicable or Relevant and Appropriate Requirements
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Contract Laboratory Program
COCs	Contaminants of Concern
COPCs	Chemicals of Potential Concern
CSM	Conceptual Site Model
DQOs	Data Quality Objectives
EEC	Estimated Environmental Concentration
EPA	Environmental Protection Agency
FS	Feasibility Study
FSAP	Field Sampling and Analysis Plan
HASP	Health and Safety Plan
HHBRA	Human Health Baseline Risk Assessment
HI	Hazard Indices
HSMP	Holistic Site Management Plan
HQ	Hazard Quotient
ICs	Institutional Controls
NCDENR	North Carolina Department of Environment and Natural Resources
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NOEL	No Observed Adverse Effects Level
O & M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
OSWER	Office of Solid Waste and Emergency Response
PRGs	Preliminary Remediation Goals
PRP	Potential Responsible Party
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance and Quality Control
RA	Remedial Action
RAO	Remedial Action Objectives
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
R _f D	Reference Dose
RGOs	Remedial Goal Options
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RME	Reasonable Maximum Exposure
ROD	Record of Decision
RPM	Remedial Project Manager
SAP	Sampling Analysis Plan
SARA	Superfund Amendments and Reauthorization Act of 1986
SOW	Scope of Work
TAL	Target Analyte List
TCL	Target Compound List

APPENDIX C

SITE MAP



<p>ALTAMONT ENVIRONMENTAL, INC. <small>30 COLLEGE STREET, ASHEVILLE, NC 28601 Tel: 828.261.3359 Fax: 828.281.3351 www.altamontenvironmental.com</small></p>	<p>SITE LOCATION</p> <p>CHEMTRONICS, INC. SWANNANOA, NORTH CAROLINA</p>	<p>FIGURE</p> <p>1</p>
<p>DRAWN BY: JENNIFER HILL PROJECT MANAGER: STURDYMAN CLIENT: CHEMTRONICS, INC. DATE: 9/28/06</p>	<p>SCALE 0 2,000 4,000 Feet</p>	<p>P:\Chemtronics - 21151\Task 40 - Bedrock Vents\2006 Report\Report Figures & Tables\Figure 1</p>

APPENDIX D

MODEL FOR DECLARATION OF COVENANTS AND PERPETUAL LAND USE RESTRICTIONS/ EASEMENT

For Property Owned By: Chemtronics, Inc.

Chemtronics, Inc. Site, Buncombe County, North Carolina

This Declaration of Covenants and Perpetual Land Use Restrictions/ Easement ("Declaration") is made this ___ day of ___, 2008, by and between Chemtronics, Inc. ("Grantor"), having an address of ___, and the State of North Carolina ("Grantee") having an address of: ___. The real property which is identified on Exhibit A (Impacted Areas) and is the subject of this Declaration is contaminated with hazardous substances, and is an INACTIVE HAZARDOUS SUBSTANCE OR WASTE DISPOSAL SITE as defined by North Carolina's Inactive Hazardous Sites Response Act of 1987, which consists of Section 130A-310 through Section 130A-310.19 of the North Carolina General Statutes ("N.C.G.S.").

WITNESSETH:

1. WHEREAS, Grantor is the owner in fee simple of a parcel of land, encompassing approximately 1,027 acres, located at 180 Old Bee Tree Road, Swannanoa, Buncombe County, North Carolina, which is the real property legally described in Deed Book ___, Page ___ in the Office of the Register of Deeds for Buncombe County (the "Property"), more particularly described on Exhibit B (Legal Description of Property) and Schedule A of Exhibit C (Encumbrances on the Property), which is attached to this Declaration and made a part of this Declaration; and
2. WHEREAS, the State of North Carolina ("State") and the United States Environmental Protection Agency ("EPA") have determined that certain impacted areas of the Property contain hazardous substances materials and related environmental conditions, which areas are identified on the map attached hereto at Exhibit A (Impacted Areas); and
3. WHEREAS, the Property is part of the Chemtronics, Inc. Superfund Site ("Site"), which EPA, pursuant to Section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9605, placed on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix 8, by publication in the Federal Register on September 8, 1983, at 48 Fed. Reg. 40,658; and
4. WHEREAS, in a Record of Decision dated April 5, 1988, (the "ROD"), and subsequently amended on April 26, 1989, the Regional Administrator for EPA Region 4 selected a "remedial action" for the Chemtronics, Inc. Superfund Site, which provides, in part, for the following actions:

a. Source control:

- Installed a multi-layer cap (including a synthetic liner) at areas of the Site referred to as Disposal Area #6, Disposal Area #7/8, Disposal Area #9, Disposal Area #10/11, Disposal Area #23 and the Acid Pit Area;
- Constructed and maintained security fencing, vegetative covers, and where necessary, a gas collection/ventilation system; and
- Environmental monitoring to measure the success of the source control activities.

b. Migration control:

- Installed a groundwater interception and extraction system downgradient of the disposal areas in the Back Valley and one disposal area (DA-23) in the Front Valley;
- Extract groundwater, treat it, and discharge it to a publicly owned treatment works ("POTW") via the sewer; and
- Environmental monitoring to measure the success of the remediation.

A map of the Property generally is attached as Exhibit D (Map of the Property); and

5. WHEREAS, on March 22, 1989, EPA issued a Unilateral Administrative Order, Docket No. 89-21-C ("UAO") pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606, directing that the work specified by the ROD be implemented for the Site; and

6. WHEREAS, historically the State has exercised hazardous waste regulatory jurisdiction over certain portions of the Property, pursuant to the federal Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 et seq., and the North Carolina Solid Waste Management Act, N.C.G.S. 130A-294 et seq. In 1997, Chemtronics, Inc., entered into an Administrative Order on Consent, ("NCACO") Docket number 97-SF-206, with the North Carolina Department of Environment and Natural Resources ("DENR") to perform certain RCRA actions with respect to portions of the Property, including various investigation and assessment activities as well as cleaning and closing sumps. However, on March 9, 2007, DENR requested that EPA consolidate oversight of all environmental remediation activities for the Property under EPA's CERCLA authority, and relinquished its RCRA oversight responsibilities for the Property to EPA's CERCLA program.

7. WHEREAS, a Settlement Agreement and Order on Consent for Remedial Investigation / Feasibility Study, CERCLA Docket No. _____ ("AOC"), was agreed to on September, __ 2008 by and among Grantor, Northrop Grumman Systems Corporation, and CNA Holdings, Inc. (the "Settling Respondents", with Northrop Grumman Systems Corporation and CNA Holdings, Inc. together identified herein as "Non-Grantor Settling Respondents"), and EPA; and

8. WHEREAS, the AOC calls for the Settling Respondents to investigate and evaluate certain additional impacted areas of the Property beyond those covered by the ROD and the UAO; and

9. WHEREAS, Grantor has agreed pursuant to the terms of the AOC to: (a) grant to the Grantee, and its respective designees, a right of access over certain portions of the Property for purposes of conducting any activity required related to the AOC; and (b) to impose on the impacted areas of the Property certain perpetual land use restrictions and covenants that will run with the land for the purpose of protecting human health and the environment.

NOW, THEREFORE:

10. Grant: For and in consideration of the terms of the AOC and other good and valuable consideration paid and the agreements and promises hereinafter set forth, the receipt and sufficiency of which is hereby acknowledged, Grantor, on behalf of itself, its heirs, successors, successors-in-title, and assigns, does hereby covenant and declare as follows:

a. The portions of the Property designated on Exhibit A shall be held, sold and conveyed subject to the covenants, conditions, and perpetual land use restrictions set forth below, which shall run with the land, and does give, grant, and convey to the Grantee (a) the right to enforce said use restrictions, and (b) an environmental protection/conservation easement of the nature and character set forth below.

b. The covenants, conditions and perpetual land use restrictions set forth herein, which shall run with the land, shall be binding on all parties (including without limitation Grantor, Grantee and any other party) having any right, title or interest in the portions of the Property identified on Exhibit A, and their respective heirs, successors, successors-in-title, and assigns; and shall, as provided in N.C.G.S. Section 130A-310.3(f), be enforceable without regard to privity of estate or contract, lack of benefit to particular land, or lack of any property interest in particular land. These restrictions shall continue in perpetuity and cannot be amended or canceled unless and until the Buncombe County Register of Deeds receives and records the written concurrence of the Secretary of DENR (or its successor in function) or his/her designee. If any provision of this Declaration is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

11. Covenant, Conditions, and Perpetual Land Use Restrictions: The following covenants, conditions, and restrictions shall apply to the use of those portions of the Property designated on Exhibit A:

a. The portions of the Property identified on Exhibit A shall be used for commercial or industrial purposes or other functions that do not pose a threat to public health or the environment.

b. Groundwater underlying the impacted portions of the Property designated on Exhibit A shall not be used for any potable or drinking water purpose. Groundwater wells and other devices for access to groundwater underlying the portions of the Property designated on Exhibit A shall not be installed for any purposes other than non-potable use

or the investigation/remediation of the Property, except with the prior written approval of Grantee and EPA.

c. No use or activity shall occur on the portions of the Property identified on Exhibit A which will disturb or alter the remedial measures implemented at the Property, except upon the prior written permission of Grantee and EPA. These remedial measures include, without limitation, the collection, treatment and discharge of ground water; the disposal of soils; the use of soil caps; the installation of monitoring wells; the long term monitoring of groundwater and soils; signage; fencing; and other active and passive remedial systems. Paragraph 4 of this Declaration lists these remedial measures. Grantor shall have the opportunity to demonstrate to Grantee's and EPA's satisfaction that an intended use would not have any adverse impact on, or otherwise adversely affect, any containment system, treatment system, or monitoring system.

d. Grantee and EPA shall be notified prior to any facility improvements or other construction activities that could disturb the remedial measures described in subparagraph c. of this Paragraph 11 or be incompatible with the restrictions, rights and easements granted in this instrument, consistent with the provisions of Paragraphs 15 and 19 of this Declaration. Grantor may not take action to implement any improvement or other such construction activity involving the portions of the Property identified on Exhibit A without prior written approval from the Grantee and EPA.

e. There shall be no material excavation or removal of any surface or subsurface native or fill earthen materials affecting those areas identified on Exhibit A that were found to be impacted, including but not limited to, landscaping and surface regrading (with the exception of maintaining the caps and roads), without the prior written permission of Grantee and EPA. Appropriate precautions shall be undertaken to ensure that all caps at the areas identified on Exhibit A are adequately maintained.

f. The owner of any portion of the Property identified on Exhibit A shall submit a letter report, containing the notarized signature of the owner, in January of each year on or before January 31st, to DENR, or its successor in function, confirming that this Declaration is still recorded in the Office of the Buncombe County Register of Deeds and that activities and conditions at the portions of the Property identified on Exhibit A remain in compliance with the land use restrictions herein.

g. No person conducting environmental assessment or remediation at any portion of the Property identified on Exhibit A, or involved in determining compliance with applicable land use restrictions, at the direction of, or pursuant to a permit or order issued by, Grantee or EPA (or their respective successors in function) may be denied access to the portions of the Property identified on Exhibit A for the purpose of conducting such activities.

h. The owner of any portion of the Property identified on Exhibit A shall cause the instrument of any sale, lease, grant, or other transfer of any interest in such property to include a provision expressly requiring the lessee, grantee, or transferee to comply with

this Declaration. The failure to include such provision shall not affect the validity or applicability of any land use restriction in this Declaration.

12. Modification or Termination of Restrictions: The above covenants and restrictions may be modified or terminated, in whole or in part, in writing and recorded with the Office of the Register of Deeds for Buncombe County, by Grantee, after obtaining the written concurrence of EPA. At the very latest, such covenants and restrictions shall be terminated when Grantee notifies the Grantor, after obtaining the written concurrence of EPA, that the portions of the Property identified on Exhibit A do not pose a threat to human health and the environment under either state or federal law. Grantee and EPA shall review in a timely manner such termination at the time of EPA's issuance of its Certification of Completion, and if a decision is made to issue the Certification of Completion but not terminate the above covenants and restrictions, Grantee and/or EPA will explain the reasons why they believe that a threat to human health and the environment exists under federal and/or state law at that time and describe the timing and steps that will be required to terminate the above covenants and restrictions. If requested by the Grantor, and approved by the Grantee and EPA, the Grantee will execute any termination or modifications of covenants and restrictions in recordable form.

13. Environmental Protection/Conservation Easement for Grantee: Grantor hereby grants to Grantee, an irrevocable right of access at all reasonable times to the portions of the Property designated on Exhibit A with persons and by equipment for the purposes of conducting any activity related to the ROD or the AOC, including, but not limited to:

- a. Monitoring the Work required by the AOC and the UAO;
- b. Verifying any data or information submitted to DENR and EPA;
- c. Conducting investigations relating to contamination at or near the impacted areas of the Property identified on Exhibit A;
- d. Obtaining samples;
- e. Assessing the need for, planning or implementing additional response actions at or near the portions of the Property designated on Exhibit A;
- f. Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by the Settling Respondents or their agents; and
- g. Assessing the Settling Respondents' compliance with the AOC.

14. Reserved Rights of Grantor: Grantor hereby reserves all rights and privileges in and to the use of the Property (including without limitation those areas identified on Exhibit A), including the right to maintain, repair, use, operate, and replace the existing facilities on the Property, as long as the Grantor's use of the Property is not incompatible with the restrictions, rights, and easements granted in this Declaration. Grantee and EPA have found that the use of the portions of the Property designated on Exhibit A for industrial or commercial purposes, as such use exists on the effective date of this Declaration, is compatible with the remedial action and is specifically permitted, subject to state and local laws and approvals. However, such

permitted uses do not include any right to add to or expand or otherwise change the existing improvements and facilities, or conduct other activities on the portions of the Property designated on Exhibit A if such activity would disturb the remediation or be incompatible with the restrictions, rights, and easements granted in this Declaration.

15. Reserved Rights of United States and State: Nothing in this document shall limit or otherwise affect the United States' or the State's or their respective agents' rights of entry and access provided by law or regulation.

16. No Public Access and Use: This Declaration does not convey a right of access or use by the general public to any portion of the Property.

17. Requirements for Conveyances: Grantor, and any person who subsequently acquires any interest in any portion of the Property identified on Exhibit A, including, but not limited to, by deeds, leases, and mortgages, shall give (a) written notice of the AOC and this Declaration to the person or entity that will receive the conveyance (the transferee), and (b) written notice of the conveyance to Grantee, EPA and all required parties in accordance with the provisions of Paragraph 22 of this Declaration, including the name and address of the transferee and the date on which the Grantor gave the notice to that transferee. Such transfer shall take place only if the transferee agrees, as a part of the agreement to purchase or otherwise obtain any portion of the Property identified on Exhibit A, that it will comply with the obligations of the Grantor to provide access to such property and with all of the Declarations set forth in this Declaration. Grantor agrees to include in any Instrument conveying an interest in any portion of the Property identified on Exhibit A a notice, which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO THE EFFECT OF A DECLARATION OF COVENANTS AND PERPETUAL LAND USE RESTRICTIONS/ EASEMENT, DATED _____, RECORDED IN THE RECORDS OF THE OFFICE OF THE REGISTER OF DEEDS FOR BUNCOMBE COUNTY ON _____, 200__ IN DEED BOOK _____, PAGE _____, ENFORCEABLE BY THE STATE OF NORTH CAROLINA, THE UNITED STATES OF AMERICA, CHEMTRONICS, INC., NORTHROP GRUMMAN SYSTEMS CORPORATION, AND CNA HOLDINGS, INC., AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS

The failure to include such a provision shall not affect the validity or applicability of this environmental land use restriction to any impacted area of the Property identified on Exhibit A. Within thirty (30) days of executing any such an instrument of conveyance, Grantor must provide Grantee, EPA, the Non-Grantor Settling Respondents and their contractors listed in Paragraph 22 of this Declaration (entitled "Notices") with a true copy of the instrument of conveyance and, if it has been recorded in the public land records, its recording reference.

18. Construction Activities: Grantor shall notify Grantee, EPA, the Non-Grantor Settling Respondents, and the contractors listed in Paragraph 22 of this Declaration prior to undertaking any facility improvements or other construction activities that would affect any portion of the Property identified on Exhibit A and either could: (a) disturb remediation activities (including,

but not limited to, disturbing monitoring wells, potentially contaminated soils, or caps and/or capped areas); or (b) alter groundwater, surface water flow, or soil percolation patterns.

19. Administrative Jurisdiction: DENR is the state agency having administrative jurisdiction over the interests acquired by the State of North Carolina through this Declaration. The Secretary of DENR or his or her delegate shall exercise the discretion and authority granted to the State herein.

20. Enforcement: Grantee is entitled to enforce the terms of this Declaration by resorting to specific performance or legal process. In addition to the remedies available under this Declaration, Grantee may seek any and all other remedies available at law or in equity, including those provided under CERCLA. Grantee shall have the discretion to enforce the terms of this Declaration. Any forbearance, delay, or omission to enforce in the event of a breach of any provision of this Declaration shall not be deemed to be a waiver of: (a) such provision; (b) any subsequent breach of the same or any other provision; or (c) of any of the rights of the Grantee under this Declaration. EPA is a third party beneficiary to this Declaration and is entitled to all the rights and privileges accorded to third party beneficiaries under North Carolina state law, including enforcement rights. The Non-Grantor Settling Respondents, and their successors, also are entitled to enforce the terms of this Declaration. Grantor hereby waives any defense of laches, estoppel, or prescription against the United States or the State of North Carolina in any action taken to enforce the terms of this Declaration. In accordance with N.C.G.S. Section 130A-310.3(f), no provision of this Declaration shall be unenforceable on account of (a) lack of privity of estate or contract, (b) lack of benefit to a particular land, (c) the benefit being assignable or being assigned to any governmental body or to any entity with like purposes, or (d) any other doctrine of property law which might cause the termination of the provision.

21. Representations and Warranties: Grantor, for itself and for its heirs, successors, successors-in title, assigns, executors, and administrators, hereby represents and warrants to and with the Grantee, that:

- a. Grantor is the sole owner of the portions of Property designated on Exhibit A at the time of execution hereof;
- b. Grantor holds fee simple title to the portions of the Property designated on Exhibit A, subject to the interests or encumbrances identified in Exhibit C hereto and incorporated by reference herein;
- c. Grantor has full authority and power and lawful right to enter into this Declaration and grant and convey the above easement, covenants, land use restrictions, rights and interests herein provided and to carry out all obligations hereunder;
- d. Grantor has provided to Grantee the names of all other persons that hold an encumbrance on the portions of the Property identified on Exhibit A and has notified such persons of the Grantor's intention to enter into this Declaration;
- e. To the extent any other interest in or encumbrance on the portions of the Property identified on Exhibit A conflicts with the restrictions and requirements set forth in this Declaration, the persons who own such interests or hold such encumbrances have agreed

to subordinate such interests or encumbrances to this Declaration and the subordination agreement[s] is [are] attached hereto as Exhibit E (Subordination Agreements); and

f. This Declaration will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Grantor is a party or by which Grantor may be bound or affected.

22. Notices: Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing. Such written notice shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other parties in writing.

As to the State and DENR:

As to the EPA:

As to Non-Grantor Settling Respondent Northrop Grumman Systems Corporation:

As to Non-Grantor Settling Respondent CNA Holdings, Inc.:

As to Grantor Chemtronics, Inc.:

As to Settling Respondents' Contractor:

23. General provisions:

- a. Controlling law: The interpretation and performance of this Declaration shall be governed by the law of the State of North Carolina.
- b. Definitions: Any provision or term not otherwise defined in this Declaration shall have the meaning set forth in the AOC.
- c. Liberal construction: Any general rule of construction to the contrary notwithstanding, this Declaration shall be liberally construed in favor of the grant to effect the purpose of this Declaration, the AOC, and the policy and purpose of CERCLA. If any provision of this Declaration is found to be ambiguous, an interpretation consistent with the purpose of this Declaration that would render the provision valid shall be favored over any interpretation that would render it invalid.
- d. Limitations: Nothing in this Declaration shall be construed to transfer liability for environmental conditions on the portions of the Property designated on Exhibit A to Grantee or the EPA.
- e. Severability: If any provision of this Declaration, or the application of it to any person or circumstance, is found to be invalid, the finding of invalidity will not affect (i) the validity of the remainder of the provisions in the Declaration, or (ii) the application of such provisions to any other person or circumstances.
- f. Entire Agreement: This Declaration sets forth the entire agreement of the parties with respect to rights and restrictions created hereby, and supersedes all prior oral understandings relating thereto, all of which are merged into this Declaration.
- g. No Forfeiture: Nothing contained in this Declaration will result in a forfeiture or reversion of Grantor's title in any respect.
- h. Successors: The covenants, terms, conditions, and restrictions of this Declaration shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, successors, successors-in-title, and assigns and shall continue as a servitude running with the portions of the Property designated on Exhibit A. The term "Grantor," wherever used herein, and any pronouns used in place of the term "Grantor," shall include the person and/or entity named at the beginning of this document, identified as "Grantor" and its heirs, successors, successors-in-title, personal representatives and assigns. The term "Grantee," wherever used herein, and any pronouns used in place of the term "Grantee," shall include the entity named at the beginning of this document, identified as "Grantee," its personal representatives, agents and assigns. The rights of the Grantee and Grantor under this Declaration are freely assignable, subject to the notice provisions contained in Paragraph 22 of this Declaration. Any transferee of the fee title to the portions of the Property identified on Exhibit A, or any leasehold interest in such portions of the Property, shall automatically be deemed, by acceptance of such interest, to have acquired such title or interest subject to the restrictions contained or referred to in this Declaration and to have agreed to execute any and all Instruments reasonably necessary to carry out the provisions of this Declaration. Consistent with N.C.G.S.

Section 130A-310.3(f), the rights and obligations under this Declaration shall not be subject to a 30-year limitation on restrictive covenants.

i. Termination of Rights and Obligations: A party's rights and obligations under this Declaration terminate upon transfer of the party's interest in the portions of the Property designated on Exhibit A, except that (i) liability for acts or omissions occurring prior to the transfer shall survive the transfer; (ii) the transfer shall in no way alter the Settling Respondents' obligations under the AOC; and (iii) the transfer shall not affect the Grantee's rights under this Declaration.

j. Captions: The captions in this Declaration have been inserted solely for convenience of reference and are not a part of this Declaration and shall have no effect upon the construction of this Declaration.

k. Counterparts: The parties may execute this Declaration in two or more counterparts, which shall, in the aggregate, be signed by all parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In event of any disparity between the counterparts produced, the recorded counterpart shall control.

TO HAVE AND TO HOLD unto the Grantee and Grantee's assigns forever.

IN WITNESS WHEREOF, Grantor has caused this Declaration to be executed by its duly authorized representative this ____ day of _____, 20__.

WITNESS:

CHEMTRONICS, INC.

By: _____

[typed or printed name and title]

Its: _____

STATE OF _____

COUNTY OF _____

On this ____ day of _____, 20__, before me, the undersigned, a Notary Public in and for the State of _____, duly commissioned and sworn, personally appeared **[INSERT NAME AND TITLE OF PERSON]** of Chemtronics, Inc., known by me to the party so executing the foregoing agreement for and on behalf of Chemtronics, Inc., and he acknowledged said Declaration, by him so executed, to be his free act and deed in said capacity and the free act and deed of Chemtronics, Inc.

(signature)

(typed or printed name)

NOTARY PUBLIC

My Commission Expires: _____.

The undersigned, the holder of a **[INSERT NAME OF INTEREST IN PROPERTY, E.G., MORTGAGE, EASEMENT]**, recorded in the Records of _____ of the Town of _____, _____ in Book ____ at Page ____, by execution hereof, agrees that the rights and easements reserved to it and to the portion of the Property described therein and in Exhibit C of this Declaration, shall be subject and subordinate to the terms and provisions of this Declaration.

WITNESS:

[NAME OF INTEREST HOLDER]

By: _____

[typed or printed name and title]

Its: _____

STATE OF _____

COUNTY OF _____

On this ____ day of ____, 20__, before me, the undersigned, a Notary Public in and for the State of _____, duly commissioned and sworn, personally appeared **[INSERT NAME AND TITLE OF PERSON SIGNING ON BEHALF OF INTEREST HOLDER]** of **[INSERT NAME OF INTEREST HOLDER]**, known by me to the party so executing the foregoing agreement for and on behalf of **[INSERT NAME OF INTEREST HOLDER]**, and he acknowledged said Declaration, by him so executed, to be his free act and deed in said capacity and the free act and deed of **[INSERT NAME OF INTEREST HOLDER]**

(signature)

(typed or printed name)

NOTARY PUBLIC

My Commission Expires: _____

IN WITNESS WHEREOF, Grantee hereby acknowledges its acceptance of the above-described property interest (e.g., use restrictions and conservation easement) by its duly authorized representative this ____ day of _____, 20__.

WITNESS:

[NAME OF GRANTEE]

By: _____

[typed or printed name and title]

Its: _____

STATE OF _____

COUNTY OF _____

On this ____ day of _____, 20__, before me, the undersigned, a Notary Public in and for the State of _____, duly commissioned and sworn, personally appeared **[INSERT NAME AND TITLE OF PERSON SIGNING ON BEHALF OF GRANTEE]** of **[INSERT NAME OF GRANTEE]**, known by me to the party so executing the foregoing agreement for and on behalf of **[INSERT NAME OF GRANTEE]**, and he acknowledged said Declaration, by him so executed, to be his free act and deed in said capacity and the free act and deed of **[INSERT NAME OF GRANTEE]**

(signature)

(typed or printed name)

NOTARY PUBLIC

My Commission Expires: _____

Approved this ____ day of _____, 20__, by the _____ State _____.

APPROVED AS TO
TERMS AND CONDITIONS:

Chairman, State _____

APPROVED AS TO
FORM:

Attorney General

APPROVED AS TO
SUBSTANCE:

Secretary of North Carolina Department of
Natural Resources

APPROVED:

Attachments:

- Exhibit A: Impacted Areas of the Property
- Exhibit B: Legal description of the Property
- Exhibit C: List of persons, other than Grantor, who hold interests in the Impacted Areas of the Property
- Exhibit D: Map of Property
- Exhibit E: Subordination Agreements